

NO PAY.

week ending November 9 was 10,8704. 11s. 2d.

VALUABLE METALS IN BRITISH AMERICA.

THE DUCHY OF CORNWALL, AND THE MINING INTEREST.

Manchester, Nov. 10. — H. M. STEINTHAL.

THE CELEBRATED LAXEY MINES.

new discovery in the 200 north must naturally produce. I find that the mine sold

MARKET AND OTHER MINES.

I trust your "Correspondent in Truro" will follow up this subject, and he could devote his great abilities to a more legitimate and useful purpose than by visiting the mines unknown to the market, and describing their position and prospects in your columns. His remarks would be welcomed and read with great interest by a number of shareholders in mines, who would be glad to obtain disinterested information.

ROCHE AND ST. AUSTELL TIN MINING DISTRICTS

St. Austell, Nov. 12.

EAST CARADON MINE.

In all fairness, I would ask whether such a hasty notice as the following—"The node is of a comparatively trifling length, and soon passed through," when applied to a node which has proved to be a continuous course of ore for 140 fathoms in a lode which has proved to be a continuous course of ore for 140 fathoms in East Canada—is not a gross perversion of the truth.

The fact that the node is the center in East Canada is equally incorrect is the assertion that "The whole speculation is how deep shall make," for it is well known that besides the counter several lodes are cut by the sett, one of which, the new south lode, presented such indications when set at the 60, as scarcely to occasion a doubt that when cut at the 70, which will be two or three months, it will be found very productive, and should that be the case

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assert, as I did in the Journal of Dec. 7—"That these mines will pay handsomely," and I firmly believe the time is not far distant when my remarks, if the mines are properly worked, will be fully borne out. Now, look and see if my remarks are not right. This is a most splendid and valuable mining property, which demands the attention of the mining public.—A. TINKER.

NORTH CROOK.—The 170 west is improving, now producing 14 yellow copper ore per ton, and getting near the dip of the large course of ore on above. The stops in the 160 are worth 60¢ per ton, and the end again improving. 120, east of the slide, is getting into productive tin ground, now worth 14¢ per ton. The prospects of the mine generally are improving.

WEST TREVELYAN continues to attract attention, the present price of the shares being less than 3000¢. For the mine, with extensive machinery and no inducing parties to purchase. The 43 and 53 west are now making very promising early improvement, and the 25 cross-cut, north from Fryer's lode, is still in a favorable channel of ground. Fryer's lode was very productive in Owen Sound. The immediately adjoining West Trevelyan to the west, and the chances are great of a good in West Trevelyan.

WHEEL GREVILLE has lately improved in the 80 west, on the east side of the lode now yielding full 1 ton of ore to the fathom. The ore ground is expected to be met with in the 66. They do not expect to meet with the rich ore ground in the 66 before they have driven 6 or 7 fathoms further; this will be a very important watch, and the belief is that the lode will be cut rich.

CROOKHAVEN MINING COMPANY.—We are glad to learn that change for the better is taking place in this mine; the improvement in the strike of the 600 cross-cut, indicates the nearing a lode, and as the north lode are in the dip, it is strong presumptive evidence that a body of ore will be met with the rock. The mine is now probably to be in a few fall months.

GREAT TYWYRNAHALE MINE is looking well; a meeting is called for the 19th, when alterations will be made, and fresh blood will be brought to bear on the property, which only requires a short time to make it dividend-paying is a large and efficient plant, and a good directorate.

NEW EAST VHEAL RUSSELL.—The prospects at this mine are proving, producing splendid stones of rich coated copper ore. At the adjourned held, on Thursday, Captain Giffard's report was considered highly satisfactory, and is driving at 70s. per fathom, not 20s. as reported in last week's Journal.

LLANFAIR MNES COMPANY.—The machinery and materials upon property, which is situated near Lampeter, Cardiganshire, was submitted for sale at Auction Mart yesterday, by Messrs. Haswell and Buckland. The whole was sold, lot, and bought for 750*l.* by the Lisburne Mines Company.

FOREIGN MINES.

YUDANAMUTENA COPPER.—Captain Terrill reports:—Section No. 1 shaft is down 5 fathoms; the lode is about 4 ft. wide, of solid grey ore tangled with iron, slate, and killas, and large rocks of copper ore. No. 1 level about 19 fathoms; the lode in the present end is small, with very little copper larger in the bottom of the level than in the back. I have put two men (No. 1) on this lode, as there appears to be a large body of copper just the distance between this winze and No. 1 shaft is about 144 feet, and I can run on the back of the lode all the way. No. 2 shaft is down 11 fms., the lode varies in size from about 1 foot to 2½ feet in width, composed of iron, gossan, and green and blue carbonate of copper.—Section 135 s. No. 3 level is in about 10 fms. varying from 6 in. to 1½ ft. in width, of very good ore. The mine is looking promising now than ever.—Section 141. No. 4 shaft is down 8 fms., and through the hill. We intend to sink as deep as the base of the hill, and then drive south; the lode is 3 ft. wide, of copper ore and gossan. No. 1 shaft is down 10 fms., the lode is 3 ft. wide, of copper ore and gossan. No. 2 shaft is down 10 fms., below the surface. We shall sink this shaft down to the base of the hill, north to communicate with shaft No. 4. This shaft has gone through the rich quality and floors of sand rock; the lode in each end of the shaft is 6 ft. wide, of ore and gossan. No. 2 shaft is down 5 fms.; we are taking each shaft for ore; the working is 6 feet wide, of rich ore; no wall as yet. No. 3 down 4 fathoms, and through ore ground all the way. No. 5 shaft is down 3 fms., below the surface; sunk through a lode of gossan and ore 4 feet wide. We are now working from Port Augusta, from this mine, and the average of which I believe to be 40 per cent. of copper, and 43 tons above 30 per cent. of copper. The mine about 60 tons to clean up for shipment, and about 100 tons of a lower

GREAT NORTHERN COPPER.—We have the pleasure to enclose lading of 1260 bags of copper ore, containing 72 tons, per *Allegany*. There is a parcel of ore at Port Augusta (18 tons), which had arrived there since the *Allegany* left, and which we hope to get on board some of the next ships. The ore is of the regular grade, as the committee has learned from Mr. Morrell, the agent. It is regretted that the *Allegany* was not able to load the port that the excessively hard nature of the ore has caused. The ship sunk at the Nuccaleena renders the work very tedious. In order to expedite the work, it has been determined to drive a cross-cut in the 20 instead of the 25, first intended. The information that will then be gained as to the character and the direction which it is taking must guide our future operation. In the event of a cross-cut being driven, it is expected that the pay-roll will be considerably reduced in the monthly expenditure at the mine.

NORTH RHINE COPPER.—Capt. Barkla reports: The men in the 60, north of Coppe's engine-shaft, on the course of the main lode, have a course that has intercepted the lode at right angles, so that it has dislocated point, and heaved the lode east into a stratum of hard greenstone; therefore, the men who were driving the end to sink a winze in the bottom of the Coppe's engine-shaft, on the one that has gone down in the bottom of the above main lode. The men in sinking the winze have cut a kindly lode, about with good stones of ore in it; the lode is likely to make a large quantity of

PORT PHILLIP AND COLONIAL GOLD.—There is little alteration in the mining operations since last month, the stops at work being the same, but a change has taken place in the management of the No. 3 shaft, to allow of sinking being resumed, and they are opening out the No. 3 from the shaft at 300 ft. from the surface. The forehead of the west cross-cut the Old Man vein, which here present as large mass of quartz, similar to the cross-cuts above. The eastern cross-cut has just reached the east vein, for a good deal of water is draining off. The vein is here about 8 ft. wide, and kindly looking, and showing a good deal of gold; in fact, presenting the same appearance as in the rich ground above. Dividends to the amount

ENGLISH AND AUSTRALIAN COPPER.—The stock of coal at Koorunga 80 tons; at Kapunda, 1319, and at the Port Works 939 tons. The stock of Koorunga, 750 tons, and at Port Adelaide 154 tons. There were three smelters and one refinery at work at the Port Works, and four smelting furnaces and one refinery at Koorunga. The whole of the company's operations were proceeding satisfactorily, and the teams were in good working order.

WORTHING.—The stopes in work are fully as good as what was written. The end, south of Legg's shaft, has improved both in quality of the ground is very much eased, and can be driven for 10l. per fathom less than was paying two months ago. I am of opinion that the lode has made a split, and is only one part of it, which is about 2 feet wide, of good dredge work, and runs from 1½ to 2 tons per fathom. It appears to be opening out as we drive on.

There have no change the cross-cut driving towards the Boudry's lodge. We made a cross-cut, east from Lean's shaft, at the 33. We have driven about 100 yds. and small branches of rich yellow ore, one of which appears to be a continuation of the main plan; this branch is about 10 inches wide, and is estimated about 1 ton in thickness. All the other branches appear to be a dipping into it as they go on, and add to the value of the property. We have put in and sampled 160 tons of ore, and found it to be of the same quality as the ore from the Boudry's mine. It is double the quantity of last month, and of higher produce: 20 tons of ore had been shipped per *Orient*, and about 20 tons of ore produces on the mine.

GREAT BARRIER.—The manager says:—"I am fully impressed by the importance of urging the saw-mill works to completion as rapidly as possible. Timber is very high, and likely to maintain its price, although several new mills have sprung up. Kauri, however, is now becoming much scarcer. I regard the company have two large forests of kauri pine."

April last, as I informed you, I sowed some grass seeds immediately after the fern. The result has exceeded my expectations. There is now a good many parts, and the small flock of sheep there, which I have reduced by rams and wethers away, are thriving very nicely. They have also commenced to breed. I think I shall be warranted in placing some one there to look after them shortly, as without constant supervision they become very wild and difficult to handle.

The account of this little station, owing to the wool produced last year, five or six wethers to the Kalarara store, shows a small balance in its favour. Kaikoura and Mohunga disbursements, it will be observed that I have paid 31*l.* 14*s.* and 32*l.* 8*s.* 6*d.*, making a total of 64*l.* 2*s.* 6*d.* This is the second of the purchase-money of the sheep bought of Macfarlane. I have just paid the last instalment of 64*l.* 2*s.* 6*d.* I have, so far, great reason to be satisfied with the result of this little purchase. At Mohunga, when I left the Barrier a few

wards of seventy out of one hundred and forty-four ewes had lambs, and two casualties, we have a lamb for every ewe. At Kalkoura we are as fortunate. The balance-sheet of Kalarara store (enclosure 4) shows a profit of 71*l.* 12*s.* 10*d.* The business upon which this profit was realised did not more than 350*l.*, the balance being for goods supplied to the various farms &c., at cost price. Full details will be sent by next mail.

DUN MOUNTAIN.—Our chrome operations will be made as further available vessels offer. We draw this month 1800 tons of which is still to be placed to capital account. Further chrome discovered, and a few additional specimens of rich copper ore from old workings, quantity of copper ore.

LUSITANIAN.—Nov. 5: Palhal Mine—Basto's Lode: The best chrome ore in the district is worth 2000 tons.

lor's shaft, below the 60, is worth 5 tons per foot. The 1st to 60 ft. The same level west has a branch of ore in it worth 1 ton per foot. The west of Taylor's shaft, has very much improved, being now worth 1 ton per foot in the 38, west of the same shaft, is without ore to value. The ground slide lode, is suspended for the present, and the men are put to cut ground for rising against Perez shaft; the ground here is very hard. The lode in the slide lode, west of Abel's winze, is split into small strings, all very small. The lode in the slide lode, west of Abel's winze, is split into small strings, all very small.

ground is hard, so that the progress in the end is slow. At the level of Perez shaft, it is $1\frac{1}{2}$ ft. wide, worth $1\frac{1}{2}$ ton per fathom. At the adit level, shaft, the lode is disordered, and we are trying a branch in the north side, any better. The lode in the 60, west of River shaft, is worth $1\frac{1}{2}$ ton per fathom. The 60, east of River shaft, the lode is $1\frac{1}{2}$ ft. wide, and unproductive. The 60, west of Cisco's rise, above the 8, west of Perez shaft, is worth 1 ton per fathom. The 60, west of Cisco's rise, above the 8, west of Perez shaft, is worth 1 ton per fathom. The slopes No. 2 and No. 3 are second.

in the slopes No. 1 is worth 2½ tons per fathom. The slopes No. 2, 3 are worth 1 ton per fathom. The slopes No. 4, 5 are worth 1½ ton per fathom. The slopes No. 6 are worth 1½ ton per fm. The slopes No. 7 are worth 2½ tons per fathom. The slopes No. 8, above the 60, east of Hill, are worth 2 tons per fm. The slopes No. 9 are worth 1½ ton per fm. The slopes No. 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820,

—Mill Lode: In Barnardo's rise, above the 40, west of Oak shaft, the lode in the stopes No. 15 is worth $\frac{3}{4}$ ton per fm. The stope No. 16 is worth $1\frac{1}{2}$ ton per fm.—Great Caunter Lode: In the 40, west of Oak shaft, is produced $\frac{1}{2}$ ton per fm. The lode in the rise above the 40, west of Oak shaft, is produced ore. The lode in the stopes No. 13 is worth 1 ton of ore per fm. The lode in the 50, east of Martins winn, is worth $1\frac{1}{4}$ ton per fm. The lode in the 50, east of Martins winn, is lead throughout, also stones of copper ore in it, worth $\frac{1}{4}$ ton per fm.

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BRITISH MINES.

HOLLOWAY'S PILLS—HEALTH AT LITTLE COST.—With the fall of the vigorous declines, impurities poison the blood, and disease results. These noxious matters from the system, and are on this account the best and most efficacious medicine. They improve both the appetite and digestion, and so recruit the exhausted and emaciated gain flesh and the feeble get strength. Their restoration is equal to any emergency; they almost recall life when waning in purity of the blood, and apparently fast reaching its lowest ebb. Holloway's pills are a successful assailant of the essence of all diseases, which is an impoverished condition of the blood, hence their superiority in every respect to all other drugs.

The last report. The soil, going east of boundary, has slightly improved during the past week. The lode in this end is 3 feet wide, containing clay-lase, quartz, blende, anserite and spots of lead ore disseminated throughout, showing symptoms for further improvement. The lode in the west end of the slope is 15 feet wide, the lode in the middle of the slope 15 cwt. of lead ore per fm. The lode in the stopes over the back of ditto, 20 fms. east of boundary, is worth 12 cwt. The lode in the stopes over the back of ditto, 15 fms. east of boundary, is worth 15 cwt. of lead ore per fm. The lode in the 20 is composed of clay-lase, carbonaceous clay, anserite, spots of copper and lead ore. The lode in the stopes over the back of ditto, 15 fms. east of boundary is worth from 3% to 10% of lead ore per fm. The lode in the stopes over the back of ditto, about 10 fms. east of boundary, is worth 15 cwt. of lead ore per fm.

is again drained at Higbburrow shaft, and we are now engaged cutting the plat at the 33, and hope to commence sinking below the same in course of next month. No alteration in North Treaskerby lode, at the deep adit level, west of Oate's shaft, for the week.

GREAT NORTH DOWNS.—T. Trelease, Nov. 8: Yesterday being our turnwork and tributing, I beg to hand you particulars of same. In the 47 we have set a cross-cut to drive north from the engine-shaft by the sumpmen at 101. per fm.; these two cross-cuts are driving against each other for the purpose of facilitating the discharge of the stuff from the lode, and likewise to enlarge the pit; this will be communicated, we expect, next week, soon after we shall commence sinking the engine-shaft below said level. Vivian's lode, in the slope near the bottom of the 47, is improved; it is quite 3 ft. wide, and a leader of ore on the south wall about 9 in. wide, very porous, and letting out a quantity of water; the other part of this lode is composed chiefly of capels, mixed with copper ore, and worth about 107. per fm.; we consider this a very promising feature, from the character of the lode and the discharge of water it indicates being in connection with a bunch of ore. By sinking the engine-shaft about 6 feet deeper than the present bottom, which is 2 fms. below the level, we shall intersect the lode, where ore may be expected to be met with. The 40 to drive west of Rule's shaft, on Pendare's lode, by six men, for the month, at 61. 10s. per fm. The lode in this end is 3 ft. wide, mixed with ore throughout of a more promising appearance. The level to clear, east of Sleggan's engine-shaft, by two men and one boy for the month, or so far east as to join Wheel House, at 5s. per fm.; we find all of the back and bottom of this level stopped away; this level to clear west of the above shaft, by two men, at 4s. per fm. A cross-cut to drive south of Lord's east shaft to intersect the tin lode, by two men and two boys, 2 fms., at 80s. per fm. Brown's shaft to clear below the 17 by three men, as deep as the 27, at 15s. per fathom. A cross-cut to drive south of Bowden's shaft, at the 40, by three men and three boys, 3 fms., or cut the Coal-yard lode, at 81. per fm. A winze to sink below 20, on the Coal-yard lode, by six men for the month, at 81. per fm.; the lode in this winze is 2 ft. wide, producing good stones of copper ore of a more promising character. The 23 to drive east of Gribble's shaft, on the New Briglan lode, by four men for the month, at 51. per fm.; the lode is 15 in. wide, containing spots of copper ore. We have put the flat-rod to work at Job's shaft on this lode, and have dropped about 2 fms. below the 40, which appears to be filled up to this point with rubbish. The rods, &c., work very well, indeed. We have set 16 pitches in various parts of the mine, varying from 10s. to 13s. 4d. in 11.

GREAT HEALACK.—W. H. Reynolds, Nov. 11: At the shaft the lode is large, and contains spots of yellow copper ore. The lode in the 40, east of engine-shaft, is poor, but in the 40 west the lode is yielding some good blende. The winze on Peru lode is down 5 fms. below the 30, and the lode in bottom of the winze is 1 in. wide, composed principally of spar, and at present poor for silver; like other lodes, it is subject to changes, and we hope it may improve again ere long. We have about 7 cwt. of silver work ready for sale, which, according to assays made, contains from 80 to 90 ozs. of silver per ton, and 4 cwt. yielding at the rate of 36 ozs. of silver per ton; the best lot will be about 4 cwt., and will be ready in three or four days to be assayed.

GREAT SOUTH TOLGUS.—John Daw, Nov. 12: Friday last was our setting-day, when the following were set: The lode in Lyle's shaft, sinking below the 140, is 8 feet wide, worth 100. per fm. for tin, and 30s. per fm. for tin. In the 140 east the lode is disordered and unproductive—set for four men, at 41. 10s. per fm. Very little has been done on the tin lode in the 140 cross-cut since the last report—set to cut through by four men, at 91. per fm. In the 125 west, and about 14 fms. from shaft, we have commenced a cross-cut south, to see if the tin lode is behind us in this level—set to four men, at 41. per fm. The 112 west of Lyle's shaft, is suspended, and the men are put to rise in back of the level, at 31. 5s. per fm. In the 100, east of cross-course, the lode is large, but unproductive—set for four men, at 71. per fm.

GREAT TREGUNE CONSOLS.—Wm. Richards, Nov. 13: Hobler's shaft is the requisite depth for a 92, the lode in the deepest point being 4 ft. wide, containing compact and friable quartz, iron, manganite, and some rich yellow copper ore. The shaftmen will proceed at once to cut and divide the shaft from the 50 to the 92, to bring down the machine-kibble previous to driving at the bottom of the mine. The lode in the slopes in back of the 80, east and west of winze, yields some good ore for the floors. The machinery continues to work well.

GREAT TYWANHALL.—J. Hampton, J. Daw, F. Hampton, Nov. 11: In the 100 east (bottom level) the lode is 5 or 6 feet wide, ore throughout; no time will be lost in communicating this end to Bennett's shaft. There is also a great ore lode in the 90 east, and also in the 10, before this end; there is a good lode going down in bottom of the 80, which is in drain. In the 80, west of James's, there is nothing new since last report. We are driving the cross-cut south in the 50 at Haynes with all speed, but have not yet cut the lode. The country is traversed with branches of ore, and the water is increasing. The value of the pitches throughout the mine is fully maintained. The mine is in fork to bottom, and the machinery working well.

GREAT WHEAL BADDERN.—J. Hampton, J. Jenkin, Nov. 6: In the open cutting we have laid open the back of the lead lode, which carries a regular wall, and in the right direction of the lead lode; the composition of the lode is spar, gossan, jack, muddle, and particles of lead. Assuming that the underlie is the same as it is in the old mine, we have to drive the cross-cut as far as the ledge where we always expected to cut the lode. We send you a box of the gossan, which is very good. The lode in the cross-cut going towards the lode is stronger, and the ground a little cleaner. The 10 west, on the tin lode, is looking very promising; the vein is about 3 feet wide, with defined walls. We send the tin assay, as per enclosed ticket from the assayer. We shall know the result of the highest bidder by the beginning of next week, which shall be made known to you. At Buckley's the horse-whim is erected, and the shaft will soon be in good condition for any purpose it may be required for.

GREAT WHEAL BUSY UNITED.—T. Trelease, R. Giles, E. Richards, W. Trelease, J. Petherick, Nov. 11: There has been no lode taken down in Harvey's engine-shaft for the past week. We are getting on with the sinking pretty well, and hope to be able to commence driving the 130 east by the end of the present working month, where the lode is now worth 40s. per fm. for tin. The lode in Offord's shaft, sinking below the 120, is 18 in. wide—unproductive. The lode in the 120, driving east of said shaft, is 12 ft. wide, containing stones of copper ore. The lode in the winze sinking below the 110, east of Offord's shaft, is 1 1/2 ft. wide, worth 251. per fm. The lode in the 110, driving west of Wastley's winze, is worth 101. per fm. The lode in this level, driving east of said winze, is just as last reported—disordered by the elvans. The lode in the 110, driving east of Levett's winze, is 4 ft. wide, worth about 101. per fm. The lode in the 100, east of Offord's shaft, is 4 ft. wide, worth 251. per fm. The lode in the 100, driving west of Coleman's winze, is 4 ft. wide, worth 251. per fm. The lode in the 100, driving east of the level driving east of Offord's, in the course of a day or two from this time. The lode in this level, driving east of this winze, is 6 ft. wide, worth 201. per fm. The lode in the 100, driving west of Mathew's shaft, is worth 101. per fm. The lode in this level, driving east of said shaft, is still disordered by the elvans. No change to notice in any other part of the mine for the past week.—Boscawen's Mine: The lode in the 170, driving west of engine-shaft, is 2 1/2 ft. wide, with spots of copper ore. Hunter's shaft is now sunk 11 ft. below the 60. The lode in the shaft is about 2 ft. wide, yielding stones of copper ore, but not to value. The lode in the 60, driving west of said shaft, is still changed—3 ft. wide, stones of copper ore. The lode in the 50, driving west of this shaft is 18 in. wide, worth 61. 6s. per fm. There is nothing else new since our last report. We expect to put Wheel Daniel engine to work at the end of the present week.

GREAT WHEAL FORTUNE.—J. Vivian, N. T. Miners, T. George, Nov. 10: Old Mine: The cross-cut at the 95 fathom level is driven north of Harvey's engine-shaft 1 1/2 fms., driving by six men, at 101. per fm. The lode in the rise in the back of this level, south of shaft, on the branches, is worth 101. per fm. The lode in the 85 fm. level, driving east of Harvey's engine-shaft, is worth 91. per fm. The lode in the 70 fm. level, driving east, is worth 101. per fm. The lode in the 50 fm. level, driving east, is worth 91. per fm. The lode in the 30 fm. level, driving east, is worth 101. per fm. The lode in the 50 fm. level, driving east of the Blue Burrow shaft, is worth 61. per fm. Carmel: The lode in the 90 fm. level, driving east of cross-course, is 3 feet wide, composed of peach, pryan, muddle, and spar; the lode altogether presents a very kindly appearance. No change in the 78 fathom level driving west. The lode in the slopes in back of the 78 is worth 1001. per fm. The slopes in the back of the 68 fm. level, east of shaft, are worth 151. per fm. No change in the 36 fm. level driving west of Croth's. The lode in Hoskin's flat-rod shaft, sinking below the 78, is worth for its length (12 feet) 151. per fm. The lode in the 78 fm. level, driving east of Hoskin's flat-rod shaft, is 4 ft. wide—sparine work. The lode in the 68 fm. level, driving east, is 4 feet wide, worth 81. per fm. The lode in the slopes in the back of this level, west of shaft, is worth 201. per fm. The lode in the 48 fathom level, driving east of eastern shaft, is 5 feet wide—stamping work. The tribute pitches continue to yield an average quantity of tin. We shall have 20 tons black tin ready for market on Wednesday next.—J. Vivian, N. T. Miners, T. George, Nov. 13: The lode in the 90, driving east of Carmel engine-shaft, on Carmel lode, is improved, now producing rich stones of tin. A further improvement is anticipated. The tin is not with in this level several fathoms before it was expected.

GRESTAN.—J. Kemp, Nov. 12: We have not yet cut the lode by the cross-cut east from the 84, but expect to do so almost every day. The lode in the sump at the bottom of the 84 is looking very promising indeed, and is producing some good stones of ore, so also is the sump in the 25 yard level—indeed, it is giving some capital work, and I think, from all appearances, that it will prove to be a good piece of ore ground. We shall have to open an old shaft on the western side of the present whim-shaft, to draw the stuff to surface with facility.

GUNNIS LAKE.—N. Secombe, Nov. 13: The lode in the adit end, driving east on the Bonny lode, maintains its size and character, but does not appear to be of so much value for tin as it was a few days; it contains a good deal of quartz, and some of the peach-cut, with tin and some very fine rocks of copper ore; to all appearance changing again for copper. In the 10 east the expected cross-course is intersected; the men are now put to sink the engine-shaft in the bottom of the level to meet the rise being put up from adit level, which is progressing satisfactorily. A full party of men are also sinking the shaft from below the 25, at surface, to the 10, above adit, which is also progressing satisfactorily, and in a few months we hope to effect a communication with the shaft now 58 fathoms below the adit level, when levels will be extended both east and west through the courses of ore passed over in driving the adit. We are erecting the stamps and preparing the floors for dressing the stuff which has been broken, and we think it will turn out well.

HARWOOD.—Jos. Race, Nov. 11: The end of the drift east, on No. 1 vein, continues about the same as before, worth 4 tons of ore per fm., and looks like nothing but continuing or improving. We have driven 6 fms. on the vein since we came to rich ore, but it has not been so good for ore all that distance as it is at present. We are driving in the middle of the sea limestone, leaving a slope 3 yards high underfoot, which will raise on an average 2 tons per fathom. We have also a slope in back of the drift worth 1 1/2 ton per fm. The end west is worth 1 ton of ore per fm. The workings on the side of the vein in the flats will now yield 1 ton per week, working by two men. The cross-cut from the wagon-way is now about 3 fms. back of the vein; when this is cut through it will lay the slopes open for working, and bring the wagon-way into the vein, which will greatly facilitate the work. Our dressing-floors are at present on a very limited scale, but we have got 9 tons of lead ore dressed, and 5 tons more on the floors, and I intend to have 24 tons ready for sale before Christmas. After a long succession of disappointments I am happy to say I have no doubt but Harwood Mines will turn up a trump at last.

HAWKMOOR.—Joseph Richards, Nov. 11: The lode in the 50, west of the eastern engine-shaft, is about 2 feet wide, composed of capel, quartz, and spots of yellow copper ore. In the 30, west of Graham's shaft, the lode is increasing in size, and from its general appearance an improvement may be fairly looked for.—W. Harwood: No. 3 lode in the adit level driving west is about 2 ft. wide, composed of quartz, capel, muddle, and a little improved for tin, producing some saving work. The slopes in back of this level are turning out fair average quality tin ore.

KELLY BRAY.—S. James, Nov. 8: There is no change to notice in any points which are in operation during the past week. The lode in the rise in back of the 35 east is still looking well, worth from 301. to 351. per fm., going east in whole ground. The 25 east is progressing satisfactorily, and is looking promising to become more productive ere long. We hope to make a communication with the rise in back of the 35 in about a month from this time, after which there will be a quantity of valuable ground laid open, if the same prospects continue as at present, and good ventilation in both levels—the 35 and 25. The machinery is all in good working order.

KESWICK.—The end of the adit level is not so good at present, as regards lead, as when last reported, value at present 5 cwt. per fathom. The lode holds on strong and healthy, but is more compact, and the ground is closer. In the 90 fm. level north end we have no change to report; the end is still unproductive, and the ground rather close. We have not more than 6 in. wide of quartz, but have a large strong vein stone accompanying it. In the 40 fm. level north end we have a little lead, worth 5 cwt. per fm.; the lode is very kindly in its nature, but rather small; the strata are favourable lead. In this end we shall soon reach the point where the lode turns eastward upon the 30, and I am somewhat anxious to see if the same beaver occurs in the 40 fathom level. We got into the 40 fathom level north on Monday morning, and to the south end

in the middle of the week; the water is now quite manageable. We have been drawing from the 80 fathom level for the last three days. In the 50 north, west vein, we have met with a small branch, or string, which has come up from the end, and which I hope will improve the lead. The vein seems rather disturbed and untidy in its bearing. The lode is at present composed of a hard compact quartz, with irregular bunches of lead, of which it will yield about 8 cwt. per fm.; the ground is closer than usual. In the 50 fm. level south end the lode is composed of hard quartz, spotted with lead, but not enough to value; the ground is very tedious at present, being somewhat broken, unsmooth, and wet. We have no change in the cross-cut on old Brandy.

LADY BERTHA.—Capt. Harper and Metherell, Nov. 10: The lode in the 41 east composed from 2 to 3 ft. wide, composed of peach, muddle, and ore, worth of the latter 1 1/2 ton, or 41. 10s. per fathom. In the 30 east the lode is slightly disordered, not being sufficiently of the influence of the cross-course; when we last cut into it it was composed of peach, muddle, and a little ore. In the rise above the back of this level we are going up by the side of the lode; we expect to take it down shortly. The lode in the back of the 20 east is about 4 feet wide, composed of quartz, muddle, and ore, worth of the latter 3 tons, or 91. per fm. In the western end or slope the lode is also about 4 ft. wide, carrying quartz, muddle, and ore, worth of the latter 3 tons, or 91. per fm. In the eastern end or slope, the point on which we place the greatest importance, we have a good lode, about 4 feet wide, consisting of ore, quartz, and muddle, worth of the former 8 tons, or 241. per fm. The tribute department continues to yield much as usual—a moderate supply of ore. Our sampling for the past two months is 195 tons (computed). At the new eastern shaft the men have just commenced cross-cutting north from shaft towards the lode, the ground being of a congenial character.

Capt. Harper and Metherell, Nov. 13: I beg to state there is no change to notice in the 53 cross-cut during the week. The lode in the 41 east is about 2 ft. wide, composed of peach, muddle, quartz, and ore, worth 1 1/2 ton, or 41. 10s. per fm. In the 30 east we are still driving by the side of the lode. In the rise above the back of this level we have just taken down the lode, and find it about 2 ft. 6 in. wide, composed of ore and muddle, worth of the former 5 tons, or 151. per fm. The lode in the back of the 20 east is not so good as it was when we last reported, carrying a quantity of quartz. The slopes in the eastern end continue to look pretty well. Surface gravels as usual. Sisting of muddle and ore, worth of the latter 5 tons, or 151. per fm. In the western slope the lode is from 2 to 3 feet wide, composed of capel, muddle, and ore, worth of the latter 3 tons, or 91. per fm. The tribute department continues much the same in appearance as for some time past. At the new eastern shaft the men are engaged making fair progress with the driving of the cross-cut north from the shaft.

LANERCH-Y-BAID.—E. Lloyd, Nov. 12: There is little change here. There are a few lumps of ore in the joint at the 50 yard cross-cut, and by the next report I believe we shall be in the vein; we will do our best. We have holed to the old work to-day, and all the water has gone to the bottom cross-cut, and the tribute will have for the future more room.

LLYWERNOG.—M. Barbery, Nov. 12: The cross-cut at the 30, south of engine-shaft, is progressing most satisfactorily; it is now in 7 1/2 fms., in much more favourable ground. We have four men repairing and dividing the shaft below the 30—that is, to the bottom of these ancient workings—and which we find to be yet 6 fms.; so soon as cleared we shall stop the old bottoms, both east and west of engine-shaft. This piece of unexplored ground we find to be much more extensive than was at first expected; it is 25 fms. long—viz., 13 east and 12 west of shaft. I have this day examined the bottom so far as cleared, and I am glad to say that the lode is much more promising than could have been expected, and it contains a good mixture of lead ore. This goes far to prove that the old workings were stopped by water. Surface gravels as usual.

LOWER PARK.—Wm. Davies, Nov. 13: The eastern shaft is driven down with all speed; we are nearly 30 yards deep at present. The 26, driving east from office shaft, is unproductive for lead ore. The 40, driving west from Stuart's shaft, is without alteration since last report. The rise in the back of the 40 west is producing a little ore. **MAUDLIN.**—John Tregay, Nov. 8: The ground in the bottom end west is without change since last report—still hard; the lode is muddle, with spots of ore. We have completed the work in the shaft, which took us longer than we expected, from a greater extent of the shaft, requiring new timber than we had calculated on; this is now secured, and the necessary arrangements in the pitwork effected, so that now we can employ our force in the bottom end without intermission, and hope soon to be able to report something favourable.

MINERA UNION.—W. T. Harris, Nov. 13: The lode in the 80 yard level north is 4 ft. wide, of a very promising character, and producing 15 cwt. of lead per fm. The winze sinking below this level is down 10 yards, and progressing satisfactorily. The 60 yard level north is poor for lead, but the prospects are more encouraging. The tribute pitches are a little improved.—Llewellyn: The lode in the level west from cross-cut is much easier for progress, and from its character I anticipate meeting with the junction in a short time.—Fishe Shaft: The 30 yard level west produces 10 cwt. of lead per fm. Should such prove to be the case, there will be a long productive piece of lode available nearer the cross-course. In the 50 the lode in the end will yield 4 cwt. of ore per fm.; as the lode is being taken down in the end it is found to be better again in size; there is 11 fms. driven through this new discovery of ore. The pits are generally looking well, the eastern pitch in the 50 being let at 2s. 6d. in 11. Other pitches varying from 6s. 8d. to 13s. 4d. in 11.

PANT-Y-PYDEW.—R. Nankivell, Nov. 12: At Kendrick's engine-shaft we taken out all ground required for the feed-off bob, and are ready for fixing the rib. The shaftmen at present are working on surface, taking out ground for pond, ball, and bob. The carpenters and masons are getting on as fast as possible with their work, the weather has been against us. Our engine is making at Leeds, and we expect here in course of three weeks.

PEDN-AN-DREA UNITED.—W. Tregay, J. Thomas, Nov. 8: The lode in the back of the sump-shaft is worth 1001. per fm. for the length carried, 15 ft. In the 110 end the lode is improving in appearance, with spots of tin. The winze in the bottom of this level is worth 701. per fm. The 110 west end is worth 81. per fm. The 100 east is poor. The 100 rise is poor. The 80 west end is worth 61. per fm. The 55 west end is worth 201. per fm. The 40 west end is worth 81. per fm. The 35 west end is worth 81. per fm. The 30 west end is worth 81. per fm. The 25 west end is worth 81. per fm. The 20 west end is worth 81. per fm. The 15 west end is worth 81. per fm. The 10 west end is worth 81. per fm. The 5 west end is worth 81. per fm. The 0 west end is worth 81. per fm. The 0 east end is worth 81. per fm. The 5 east end is worth 81. per fm. The 10 east end is worth 81. per fm. The 15 east end is worth 81. per fm. The 20 east end is worth 81. per fm. The 25 east end is worth 81. per fm. 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The 1440 east end is worth 81. per fm. The 1445 east end is worth 81. per fm. The 1450 east end is worth 81. per fm. The 1455 east end is worth 81. per fm. The 1460 east end is worth 81. per fm. The 1465 east end is worth 81. per fm. The 1470 east end is worth 81. per fm. The 1475 east end is worth 81. per fm. The 1480 east end is worth 81. per fm. The 1485 east end is worth 81. per fm. The 1490 east end is worth 81. per fm. The 1

shaft, the lode is 18 in. wide, producing good stones of copper ore. In the 26, east of the old engine-shaft, the lode is 5 ft. wide, composed of spar, tin, and copper ore, worth for the latter 1 ton per fm.

WHEAL UNITY CONSOLS.—W. H. Reynolds, Nov. 11: In the 75 north-west the

canter lode has an improved appearance, with some rich copper ore in it. We have just cut this lode in the 50 west, with a little ore in it, and shall see more of it in a few days. We are preparing a bob and flat-rods from the engine to the new shaft as fast as possible.

WHEAL VYVYAN.—J. Nichols, Nov. 11: The 80 west has improved a little, and we are now saving some tolerably good work from the end. One of the pitches has considerably failed, and will not pay for working. I have removed the men to the 30 west to strip down the lode at the point where I stated in my last: we had a small bunch of good work; the branch still holds good. We have opened the shaft to the west of the smith's shop, and the powder smoke clears away much sooner than it did before; we have also discovered an old level driven about 25 fms. west from this shaft in the 20; the back is standing, but what it contains I cannot as yet say, but will endeavour to do so in a few days. From what I hear, this place has not been seen for nearly thirty years.

WYVAS DOWN.—R. Harry, Nov. 12: We shall commence draining the water below the 60 to-day, and shall immediately proceed to clear this level both east and west of the engine-shaft. In the mines sinking below the 10 east the lode is gradually improving, and is now worth 32. per fm. The carbon in the deep adit east is also looking a shade better. In the mine sinking below the 40 west, on the caunter, there is no change to notice. The stopes throughout the mine are looking favourable, and producing about the usual quantity of tinstuff. The stamps are working well, and all other things going on satisfactorily.

YARNER.—R. Barkell, Nov. 12: North Lode: We have taken down the lode in the 30 east, and find it to be fully 3 ft. wide, yielding about 1 ton per fm.; the lode is very wet, and looking promising. The 40 west, on south lode, is also letting out water freely; the lode is opening a little, and producing stones of ore. The lode in the 40 east is 2 ft. wide, looking kindly, and yielding 2 tons per fm. The eastern stope, in the bottom of the 20, is improved, now worth fully 3 tons per fathom; the western one will turn out 2½ tons per fm. We have the castings, &c., on the mine, and are now busily engaged in attaching to pitwork to the water-wheel, which we hope to complete by Saturday.

GOLD IN WALES.—This question daily absorbs a larger share of public attention. Irrespective of the capital of several undertakings that will, in all probability, be launched within a short period, there is at least a million of money at present employed in the development of the gold mines of the Dolgelly district; and, from facts which are continually being brought to light, it may be said that the opinion is now more than ever confidently entertained that, with efficient and economical management, permanently successful results will be realised. As an evidence of the favour with which this subject is now regarded, it may be mentioned that one of these recently-formed Welsh gold companies numbers amongst its proprietors the Duke of Wellington, as well as several other persons of equal rank and position; also the names of at least two of the most celebrated literary men of the day; and, in addition to them, the head (or at least one of the heads) of the most eminent of the London firms connected with mining. Considerable attention has of late been directed to the various processes at present employed for the extraction of the gold, and many have been recommended which will save a very large percentage of the metal that is now entirely lost. Among these may be mentioned that recently patented by Mr. Evan Hopkins, to which allusion was made in last week's Journal. This process, it is generally believed by those best able to judge, will practically prove to be the most perfect one yet introduced into Wales.

DOLGELLY.—The various surface operations are proceeding satisfactorily, but as the mine is not yet in work nothing definite can be reported. It may be mentioned, however, that Mr. J. A. Phillips has been to the property to consult with the agent as to the erection of the most suitable machinery.

CAMBRIAN.—As stated in last week's Journal, arrangements have been finally completed with the shareholders of the North Vigna and Wellington Companies. As the directors have determined to ascertain the percentage of gold that can be extracted from a large mass of ore, some time must necessarily elapse before the fact is known; but meanwhile, several very satisfactory assays have been made, fully equal to those to which reference upon previous occasions has been made.

ST. DAVID'S.—Investigation appears to confirm the belief that this company's property abounds with the precious metal. A small stone of ore, of unimproved appearance, was yesterday crushed in an ordinary iron mortar, and visible gold obtained, which can be seen at the office of the company. The whole of the assays recently made seem to confirm Mr. Redwin's views upon the abundance of gold to be obtained from the mines of Merionethshire.

EAST CLOGAU.—This property is being worked vigorously, and there is now a considerable quantity of ore ready to be crushed, and from its auriferous nature there appears to be no doubt that subsequent operations will bring about successful results.

SOVEREIGN.—During the past few days, it is said, the applications for shares in this undertaking have been very numerous.

QUEBRADA LAND, RAILWAY, AND MINING COMPANY.—Referring to the highly favourable reports of Mr. Vincent and Mr. Wolf relative to the copper mines of Venezuela (which we published last week), we have since received for publication the following extract of a letter from Prof. Linden, director-general of the Horticultural and Zoological Gardens of Brussels, who was commissioned by the Belgian Government to visit Venezuela. He says:—"I have visited the Quebrada Mines, which are situated in an elevated and healthy district, and the copper veins appear to be almost unlimited. I believe the only requisite for their giving a very large profit is improved conveyance of the ore to the coast. The lower lands belonging to the company are of a very rich description, and contain most valuable timber."

OIL WELLS IN ENGLAND.—A well-informed correspondent, writing on the subject of Mineral Oils, says:—"A friend has lately sent me information of one district in England, which he describes as a bog of bituminous nature, that burns as if saturated with turpentine, and conveys a strong impression that it contains the petroleum oil. This will soon be proved by trial,—of which you shall have all particulars."

IMPROVED LUBRICATING AND SIGNAL OIL.—We have already referred to the excellent quality of the mineral oil manufactured by Mr. F. S. Pease, of Buffalo, New York, and it appears that there is another oil produced by the same manufacturer, which has gained even a higher reputation than the mineral oil, and which, moreover, has stood the tests of many years' trial in all parts of the United States; we allude to his lubricating and signal oil, which, whilst possessing all the good qualities of sperm, costs but two-thirds the price. So generally has the superiority of Mr. Pease's oil been recognised that he has received no less than seven prize medals from various agricultural societies and scientific institutions, and in the United States department of the recent International Exhibition some very excellent samples were shown by Mr. H. Sargent, who has accepted the agency. Two medals were awarded to Mr. Pease by the International Jurors; the one, in Class II., for "petroleum, tannol for petroleum, coal tar oil, for illumination and lubrication"; the other, in Class IV., for "excellent collection of oils, chiefly animal," and orders are being given by the railway companies of this country to test their quality in comparison with the oils now used. The best oil is said to be a combination of animal and sperm oils, and has been in use for several years on the American Government steamers, and is endorsed and recommended by the United States Government for lighthouses, signals, and engine use. A dynamometer test was made at the American Institute with the greatest care, by an instrument as accurate as mechanism could make it, arranged for testing the friction of metals and oil. These oils proved themselves equal to the best sperm, and they granted to the exhibitor a medal. One of the greatest recommendations of the oil is that, although not volatile and free from acid reaction, it will stand a great degree of cold or a great degree of heat without being affected—the range at which the oil remains limpid extending over about 60° Fahr. The winter-pressed lard oil, a sample of which is shown, stands a temperature of 2° Fahr. below freezing-point, without chilling. To suit the various cases of lubricating and illuminating, Mr. Pease manufactures something like 20 kinds of oil; and his success may be judged of by the fact that he has received many hundreds of testimonials from the most competent railroad authorities, as well as from others who have had occasion to use the oils.

MODE OF APPLYING THE ELECTRIC LIGHT FOR MINING PURPOSES.—MM. Dumas and Benoit have prepared an apparatus, which consists essentially of three parts—a battery, a Ruhmkorff's coil, and a Geissler's tube—the whole arranged so as to produce a sufficient light to illuminate the miner, and allow him to work in atmospheres where other lights fail. The light produced is cold, or rather does not heat the tube in which it is produced; and gas has no access to it: it is quite isolated. The apparatus is as compact as ordinary lamps, and there is no injurious emanation. It can be lighted or extinguished at will. It can work for twelve consecutive hours without diminution, and without requiring any change. The workman has only occasionally to agitate the carbon by means of a rod. The greatest difficulty consisted in being able to associate a battery of such intensity that the weight of the apparatus was as small as possible, the light produced of the greatest regularity, and its duration at least twelve hours. The present form of the apparatus, which may be still further diminished, is already so small that the miner can carry it without inconvenience, like a small carpet bag. The authors point out the advantages of such a mode of illumination, and state that the results obtained in using Becquerel's fluorescent tubes have led to the expectation that the luminous effect may be greatly improved both as to duration and intensity.

APPLYING WASTE HEAT FROM COKE OVENS.—An invention, which relates to a mode of utilising the spent heat of coke ovens, for the purpose of heating air for blast-furnaces, calcining ironstone and other materials, and for heating and smelting iron, has been provisionally specified by Mr. J. Harding, of Boston Manor Iron and Coal Works, Leeds. He causes the mouths of a group of coke ovens to open into a flue, which leads directly to the chamber in which the heat is to be employed.

WEATHER PREDICTIONS.

TO THE EDITOR OF THE MINING JOURNAL.

SIR,—Permit me again to thank those gentlemen who have forwarded to me the most important letters on the weather from their respective localities. With reference to the present sharp weather, it will be of very brief duration. This is the frosty dull weather foretold in a previous letter. The thunder and lightning mentioned in my last seems to have occurred in various parts of the country on the same date. With reference to the gales for the 12th and 14th, 17th, 18th, and 19th these will occur in the order predicted, as soon as the frost breaks up, with very unsettled weather afterwards.

G. SHEPHERD, C.E.,

26, Throgmorton-street, Nov. 12. Author of "The Climate of England."

The Mining Market; Prices of Metals, Ores, &c.

METAL MARKET—LONDON, Nov. 14, 1862.

COPPER.		£	s.	d.
Best selected.....p. ton	101	0	—	—
Tough cake.....	98	0	—	—
Tin.....	98	0	—	—
Burra Burra.....	101	0	—	—
Copper wire.....p. lb.	0	1	1½	—
ditto tubes.....	0	1	—	—
Sheeting & bolts p. ton	105	0	—	—
Bottoms.....	110	0	—	—
Old (Exchange).....	91	0	—	—
IRON.		£	s.	d.
Bars, Welsh, in London.....	6	10	0	—
ditto, to arrive.....	6	10	0	15
Nail rods.....	7	0	—	—
" Stafford, in London.....	7	6	7	10
Bars.....	7	5	0	—
Hoops.....	8	5	0	10
Sheets, single.....	9	0	0	10
Fig. No. 1, in Wales.....	3	0	0	0
Refined metal, ditto.....	4	0	0	0
Bars, common, ditto.....	5	10	0	—
Ditto, merchant, in Tees.....	6	10	0	—
Ditto, railway, in Wales.....	6	0	0	—
Ditto, Swed., in London.....	11	15	0	10
To arrive.....	11	15	0	10
Fig. No. 1, in Clydes.....	2	15	6	10
Ditto, f.o.b. in Tees.....	2	8	0	2
Ditto, forge, f.o.b. in Tees.....	2	5	0	—
Staffordshire Forge Pig.....	—	—	—	—
Welsh Forge Pig.....	—	—	—	—
LEAD.		£	s.	d.
English Pig.....	21	0	0	15
Ditto sheet.....	21	15	0	—
Ditto red lead.....	22	0	—	—
Ditto white.....	28	10	0	0
Ditto patent shot.....	23	0	—	—
Spanish.....	20	10	0	15

REMARKS.—During the past week nothing of an unusual character has transpired in the Metal Market, and little or no alteration is observable in the position of metals generally; there is, perhaps, rather less doing, but prices, for the most part, remain firm. Holders are disinclined to make any sacrifices for the sake of realising, as the cheapness of money enables them to refrain from pressing sales. The high rates of freights for dead weight to the East militate against speculative shipments, and merchants' indents from that quarter are anything but plentiful just now. The demand for Australia has improved, larger shipments are being made to the Continent, and also to America.

COPPER.—Sales of manufactured from second-hands continue to be made under fixed rates. Smelters very sparingly supplied with orders, the tendency of the market inclines towards a reduction in price. Cake, tile, and ingot are in fair request for home consumption, and full prices paid. Foreign is dull of sale,—sellers of Burra Burra, 101½; Kapunda, 102½; Chili, 88½; Spanish, 90½.

YELLOW METAL.—Braziers sheets have sold rather more freely during this week; makers are, however, unable to obtain above 8½d. or 9½d. per lb.; sheeting nominally quoted 9½d. per lb., but by an increased discount a considerable reduction is made by sellers. Sales for shipment very limited, and confined chiefly to the known Thames-street makes.

IRON.—Railway bars in ordinary request; ironmasters quote firmly 5½. 15s. to 6½. in Wales. Orders for merchant bars have been executed of late principally from the yards here, as stock prices are now in some quarters below the quotations for bars to come forward—6½. 10s. to 6½. 15s., free on board. Staffordshire descriptions of best brands have a good sale, and common bars are more required for since the advance in Welsh. Swedish bars are in better request, and very firm, at 11½. 10s. ex ship, and 11½. 15s. from the warehouse, ordinary specifications. Stocks have been for some time past but very slightly augmented; fine sizes scarce. Scotch pigs are very quiet, and quotations a trifle lower; mixed numbers, 56s. 3d. **SPELTEN.**—This metal is again rather attracting the attention of buyers, but only to a limited extent; the arrivals during the last few days have been very heavy, which has had rather a depressing effect on an otherwise steady market. Holders still quote 18½. cash.

ZINC.—In good steady demand, at 23½. 5s. **LEAD.**—The enquiry has somewhat fallen off; ordinary quality remains stationary at 21½; WB, 21½. 15s.—*Erratum.* In our price list above, common pig has for the last three weeks been quoted 20s. per ton below market price. We now beg to correct the oversight:—Oct. 25, 20½. 15s.; Nov. 1, 21½; Nov. 8, 21½.

TIN.—The market both for English and foreign is very quiet. Fine Straits to be bought at about 117½. to 117½. 10s. Banca quoted nominally 118½. No sales reported.

STEEL.—Arrivals to the extent of about 300 tons have lately taken place but the greater part of this is purchased for re-shipment, and that which is for the warehouse here, recent importers are unable to sell under about 16½. 10s.

BOSTON, OCT. 27.—Pictou and Sydney coals are steady at \$5.75 to \$6 per ton, and a fair demand at these prices, but most of the receipts were previously disposed of. Anthracite has been in good retail demand at \$8 per ton. Pig-iron is firm, and prices have advanced. Scotch pig has been sold at \$34 to \$35 for No. 1, and American pig at \$31 to \$33 per ton, cash and six months. Bar and sheet-iron are selling in lots as wanted at full prices.

NEW YORK, OCT. 29.—The coal market is quite active for domestic, and prices are well sustained, the arrivals are liberal, but the stock is light, and the consumption large; we quote from yard at \$6.50 to \$7.75. In foreign very little has been done, but prices tend upward; we note sales of 400 tons Newcastle Gap, and 200 tons Liverpool Cannel on private terms, and 200 tons Lancaster Gap at \$5.50, cash. Scotch pig-iron is quiet, but firm; small sales, as wanted, at \$31 to \$33, cash and six months. American is scarce, and quite unsettled; we quote nominally at \$28 for No. 1 best brands, but some holders ask as high as \$30, at which small sales have been effected from second-hands. Other kinds are also quiet, except old rails, which have been sold to some extent at \$33, cash.

THE TIN TRADE.

The business transacted in foreign tin during October was very large, and prices are fully 2½. per ton higher than at the commencement of the month. Consumers have bought freely; but the principal buyers have been importers and capitalists, who think that, with a diminished supply, and prices here considerably under those ruling at places of shipment, there is every probability of making better interest on their money than placing it at call. Although the stocks here and in Holland show an increase compared with last year, the quantity on passage to both places is reduced considerably, and the probable supplies are also curtailed. There is a rumour that a vessel, with 17,000 slabs of Banca tin on board, on her passage from Banca to Batavia, has gone down; but this, we think, requires confirmation. The demand for Banca and Japan continues, and at the date of our last advices prices in Penang and Singapore had further advanced 8½. per kpekul. We also hear from Holland that the Billiton Company have decided on selling all their productions in future in Java, instead of bringing the same to Europe for sale. It is a feature worthy of notice, that the importation of Banca to this country has lately increased considerably, and is now larger than last year. The excessive difference in price between this article and fine Straits has at last given way, and an increased demand has been the natural result. The quantity of tin here and in Holland on Oct. 31 was as follows, compared with the three preceding years:—

	1862.	1861.	1860.	1859.
Slabs. Tons.	Slabs. Tons.	Slabs. Tons.	Slabs. Tons.	
Stock in Holland.....	80,955=2510	74,683=2390	81,352=2520	72,352=2240
Arrived towards next sale.....	52,980=1645	43,038=1335	45,301=1500	57,745=1790
Stock here.....	2000	1125	560	860
Total tons.....	6155	4780	4580	4890
The quantity of Straits tin now afloat for Great Britain is 810 tons, against 1188 tons last year. The quantity of Banca now afloat is stated to be only 7636 pekuls, against 19,193 last year.				
The official returns from Holland are as follows:—				
Stock in Holland, Sept. 30.....	1862.	1861.	1860.	
Delivered in October.....	12,833	9,767	8,720	
Stock on warrants, Oct. 31.....	80,955	74,683	81,352	
Arrived towards next sale.....	52,980	43,038	45,301	
The arrivals of tin during October were as follows:—				
Straits, per Salvador packet.....	Slabs	814		
" Rance.....		2405		
" Joseph Cape.....		1289		
" Choice.....		4385		
" Willy.....		230		
Total.....		9123		
Banca from Holland.....		4360		
Besides 633 slabs Straits from Liverpool.....		13,483		
Making since Jan. 1 into London:—	1862.	1861.	1860.	1859.
Banca.....	Slabs 13,883	9,860	10,945	12,481
Straits.....	65,579	59,910	49,299	38,275
Total.....	79,462	69,770	60,304	50,756

We estimate the present stock of tin in warehouses here at 2900 tons.

The export of tin from Singapore, from Aug. 20 to Sept. 30 was—to Great Britain,

314 pekuls; to Continental Europe and America, nil. From Penang, during the period—to Great Britain, 2178 pekuls; Continental Europe and America, nil.

The import and export of tin during the month of September last, and the first months of this year, compared with 1860 and 1861 has been as follows:—

	Month ending Sept. 30.	1860.	1861.	1862.	1860.	1861.	1862.
Import.....cwt.	1068	6149	8977	38,370	35,192	38,192	38,192
Export—Foreign.....	1045	1477	602	7,561	15,008	15,008	15,008
" English.....	2851	7714	8461	41,574	45,223	45,223	45,223

Tin-plates have been in very good demand, and makers are well supplied with orders, an advance of 1s. per box is now generally demanded, to meet the increased cost of production, arising from the advance in iron and tin.

The declared value of tin-plates exported during September last, and the first months of this year, compared with 1860 and 1861, has been as follows:—

	Month ending Sept. 30.	1860.	1861.	1862.	1860.	1861.	1862.
Value.....£	156,394	£58,988	£105,523	£1,205,418	£655,275	£655,275	£655,275

VON DADLAGE and SONS.

The MINING SHARE MARKET during the week has been particularly fluctuating, and on Wednesday a complete panic set in, and shares in most every mine declined in price, consequent upon the fall in East Canada, and the numbers of shares in other mines which, it is supposed, are to be sold, to provide differences which had to be met at the settling of the fortnightly account on Friday. On Thursday, however, several of them rallied again, though it will be some time before the market is over the blow inflicted by these "bearing" and gambling transactions. The mines mostly affected were East Carn Brea, North Croft, New Roskear, Wheal Grenville, Great Retallack, Marke Valley, Great St. Tolgus, North Downs, Wheal Union, Lady Bertha, and a few others. On Friday, when the settlement of the "account" took place, business was almost at a standstill, but one or two mines in demand. East Carn shares opened on Monday at 40; Tuesday, opened 40 to 41, firm, buyers afterwards declined to 36½; Wednesday, opened 37, and dropped to 35, and a complete panic arose, but they left off firmer at 35; and Thursday they were at 38½, buyers, then declined to 36½, 37, and 38; Friday, opened 38, and leave off 37½ to 38. The latest official prices the 70 east, on the caunter lode, at 30½. per fm.; the 70 west, per fm.; the 60 east, 12½. per fm.; the 50 east, 15½. to 20½. per fm.; new lode, in the 50 west, 20½. per fm. From private inspections, we understand the lode in the 60 east is greatly improving, and letting out water. Caradon Consols, 15 to 17; Cargoll, 28 to 25; Clifford Amalgamated, 20 to 22. Condurow shares have advanced to 95, 105; Con Kitchen, 30 to 31; East Basset, 52½ to 55; East Rosewarne, 24 to 25; East Russell, 24 to 25; East Wheal Grenville, 57s. to 59s., and in demand. Gomena, 23½; Gwambler and St. Aubyn, 13 to 15. W. Margaret, 38 to 40; we stated last week that these shares were flat, owing as we understood, to an accident, of which, however, we had not then received any official information. This week a circular has been sent to shareholders, stating that, owing to the heavy rains during portions of September and October, the bottom levels of the mine became flooded, and getting out the water the backs of the levels in some places fell in, and framework of the engine gave way, and impeded operations, so that returns of tin for the quarter will be less. The agents hope, however, to resume their former position; and as many persons, evidently in secret, were selling their shares ten days ago, perhaps it would have been as well had the agents felt it to be their "duty" to issue the circular week or two earlier. Great Wheal Fortune, 30 to 31; Hingston Down, 24 to 25; Kelly Bray, 12s. to 14s.; Lady Bertha, 27s. to 29s. Marke Valley shares declined to 19½, but leave off 10 to 10½. Great Retallack shares opened this week at 26s., buyers, on receipt of the report on Wednesday, stating the Peru lode was not so poor for silver, but might improve again. Advantage was taken by the "heavy bears," during panic in other things, to knock down the shares to 12s. 6d.; they improved a little on Thursday, and leave off 15s. to 20s.: 4 cwt. of the rich ore 11 cwt. of inferior stuff are to be sold as soon as possible. Caladon shares have improved, and leave off 7½ to 7½; at the meeting the accounts showed a balance of 1215½. against the company, and a call of 1½. per share made. Painter's shaft is worth 14½. per fm. The agents calculate the loss on the next three months at 50½. only. North Basset, 31 to North Buller, 20s. to 25s.; North Croft, 54 to 6; North Downs, 3 to North Phoenix, 6 to 6½; Henrietta, 11 to 12; Providence Mines, 41 to Stridger Consols, 10s. to 12s.; South Caradon, 390 to 410. Wheal Grenville shares have been largely dealt in, and on Wednesday, in the panic, they declined to 5, but soon rallied, and leave off 5½ to 5½, but the lode has been cut into at the 120, and more will be seen of it in a few days. South Caradon Wheal Hooper, 18s. to 20s.; South Carn Brea to 34; South Frances, 95 to 100; South Tolgus, 37½ to 40; Stray P. 42 to 44; Tincroft, 13½ to 13½; West Caradon, 30 to 32; West Tolgus 49 to 51. North Roskear shares, after reaching 51, declined to 44, leave off 45 to 46; at the meeting, on Tuesday, the accounts showed balance against the mine of 7337. 0s. 8d., and a call of 1½. per share made. The report is very favourable, and states the credits at the meeting will be about 3000½, which will leave a small profit; and as ore ground at Pearce's shaft is opened out, the returns will increase, increased profits be made. Pearce's shaft is worth 120½. per fathom; 184 east is worth 40½. per fathom; the 174 east is worth 70½. per fathom; the 174 west is worth 80½. per fathom. The mine now bids fair, within a few months, to become a good dividend property. East Carn shares declined to 12 on Wednesday, but rallied again, and leave off 12 to 13½; the lode in the 60 fm. level, west of cross-cut, is yielding 2 per fm.; lode in the 50 west, 1 ton; the 50 west of cross-cut, 2 tons; lode in the 50, 2 tons per fm. Great St. Tolgus, 64 to 64½; the lode Lyle's shaft continues worth 100½. per fm. for tin, and very little done the tin lode cut in the 140. Wheal Union, 54 to 6; the lode at Lady Bertha is worth 20½. per fm. Wheal Basset, 85 to 90; Wheal Edw. 17s. 6d. to 22s. 6d.; Wheal Grylls, 26 to 28; Wheal Harriett, 14 to Wheal Kitty (Leland), 8½ to 8½. Par Consols, 4 to 5; at the meeting on the 8th instant a dividend of 4s. per share was declared, £46437. 8s. 7d. in hand. The report states that the stopes are looking up, and with the tribute pitches, they can return 25 tons of black tin monthly. Wheal Kitty (St. Agnes), 3½ to 4½; Wheal Ludcott, 11 to Wheal Mary Ann, 15 to 16; Wheal Seton, 157½ to 162½; Wheal Lanny, 17 to 18; Wheal Unity, 6½ to 7.

Wheal Unity, 18s. to 20s. (call paid); at the meeting the accounts three months showed liabilities over assets of 11577. 6s. 11d., and a call of 4s. per share was made. The report shows several favourable points in the mine, and the committee informed the shareholders that the dispute between Rosewarne Consols had been amicably settled by a division of the dispute ground, which gave Wheal Unity the new shaft, and a considerable amount on the lode discovered in it, and which at present shows every indication of a course of ore.

Many of our readers will remember when the practice of buying and selling shares for the "account" first came into practice that we strenuously raised our voice against it; and, week after week, for more than a year, deavoured to show the injurious effects it might ultimately have upon legitimate mining; and also, that dealing in shares would soon become a gambling in "time bargains," without much reference to the value of property dealt in. Our remarks, however, were unheeded, so far as the market was concerned, and the system of "bulling" and "bearing" at last became so organised and so extensively practised that the fluctuations in shares caused by jobbing operations alarm the public in general, and do infinite mischief to mining investments. Unfortunately, too, the system has great attractions for many persons besides the regular jobbers on the market, and these, if they make a lucky hit, and receive different against them, and they have to provide for their losses, they abuse all and connected with it, when in reality they should only blame themselves for gambling in shares, which is not mining at all. We have been accustomed in this article to give the heads of official reports, also to direct attention from time to time to such points as may be expected to come off in different mines, so that the bona fide shareholders may be kept advised of the state of their mines, and of coming events likely to influence the value of their property; but for some time past it must have been observed these sort of things have been of little avail. The state of prospects of the most promising of mines cannot cope against a combination formed for the purpose of "bearing," and getting down the price of shares; and we may soon have to change our system of writing; instead of calling attention to the value of "ends" in a mine, we shall say Bull and Co. are buying largely for a rise in Wheal Up; and our readers must act accordingly; or this—"Messrs. Bear and Co. are selling some hundreds of shares for a heavy fall in Wheal Down; and our readers will take this as *verb sap.*" &c. Indeed, the bearing and bulling—always the safest when we consider the odds against success in mining in general—has been reduced almost to a science, and has its various

THE ROARING WATER MINING COMPANY (LIMITED).

Incorporated pursuant to the Joint Stock Companies Act, 1862.

Capital, £18,000, in 6000 shares of £3 each.

10s. to be paid on application, and 10s. on allotment.

DIRECTORS.

Sir JAMES DOWDALL, Monkstown, and 20, Molesworth-street, Dublin.
Colonel BUSH, 65, St. James's-terrace, Regent's Park (Director of the Oriental Inland Steam Navigation Company).
CHARLES HAWKINS, Esq., 12, Broad-street, Oxford (Director of the St. Just Mines).
WILLIAM OHLVIE, Esq., Cushton-court, Old Broad-street (Director of the St. Just Mines).
Captain PAUL, Queen's-road, Bayswater (late of the Knockmahon Mines).
H. CHURCHILL, Esq., Deddington, Oxfordshire (Director of the Strand Hotel Company).
BANKERS—London and County Bank, Lombard-street.

SOLICITORS.

Messrs. Meyrick and Gedge, 4, Storey's Gate, Great George-street, Westminster.
Auditors—Messrs. Cooper Brothers, public accountants, George-street, Mansion House.

Messrs. Webb and Geach, 6, Finch-lane, Threadneedle-street, London.
Messrs. J. and J. Stephens and Son, 44, Dams-street, Liverpool.
Robert McEwen, Esq., Ducie-buildings, Bank-street, Manchester.

MANAGER—Mr. Thomas Cooper Smith.
OFFICES—5, WARFORD COURT, THROGMORTON STREET, CITY.

The object of this company is to work the copper mines of Roaring Water, situated in the parish of Aughdown, in the barony of West Carbery, county of Cork, a district well known among mineralogists as being rich in mineral deposits. The set extends over 1½ mile in length, and ¾ of a mile in breadth, and is held for a term of 31 years from July last, at a royalty of 1-18th, with a clause for renewal, on payment of a comparatively small fine at the end of that period, for the same term.

The promising character of the mines proposed to be worked by the present company fully warrants the expectation that early returns will be realized; there are 19 well-defined lodes upon the set, composed principally of yellow and peacock copper ores, rich specimens of malachite, friable quartz, and gossan of the finest description, from which many tons of rich ore have been taken, which on assay have been found to contain a large proportion of silver, and strong traces of gold, and as the geological formation is identical with that in Wales, from which so much gold is being now extracted, and from the reports of Capt. Paul (see appendix), there is every reasonable ground to expect gold will be found on this property. These lodes beyond all doubt are a continuation of the rich veins of copper now working with great promise and success at the Schull Bay, Cappagh, and Ballycummisk Mines, all of which there can be no reasonable doubt but are a continuation of the Berehaven lodes. The latter mines are said to have yielded from their commencement copper ore of the value of £2,000,000 sterling. It is well known that the quality of the ore raised there is of a far higher standard (nearly double) than the average produce of the Cornish ores; this may be tested by a reference to the Swansea sale list.

A large amount of capital has been expended on the Roaring Water Mines by parties who were unable to prosecute them in depth from want of means; this is the key-stone of success in Ireland, as well as in Cornwall, as clearly shown by the workings of Berehaven, Holyford, Knockmahon, Ballycummisk, and the Wicklow Mines, which are sunk to depths varying from 60 to 200 fathoms, and yielding increased quantities of ore the deeper they are worked; they continue to pay large dividends regularly.

The reports annexed are from men of long practical experience, their testimony as to the highly-promising character of the property, and the great local advantages by which it is surrounded will be read with interest, and leave nothing to be urged by the directors, except an assurance of their strong confidence as to its value; this assurance is further supported by the results of the assay they have obtained of the ore from the various levels—viz., the yellow ore, which may safely be considered an average sample of this class ore, 14½ per cent., and the purple ore 65 and 68½ per cent. These results are so satisfactory that no doubt is left on their minds that this property will bear comparison with any of the rich mines opened in the district; and as several thousand pounds have already been expended in opening and testing the various lodes, these works will be of the greatest value to the company, and fully warrant the conclusion that early and profitable returns may be relied upon.

The company has entered into a most favourable arrangement for the purchase of the property—viz., for £6000. The vendor has consented to take £5000 in shares, and £1000 in cash, thus proving his confidence in the success of the undertaking.

The capital of the company is fixed at £18,000, in 6000 shares, of £3 each; it is estimated that £2 per share will be ample to place the mine in a profitable state.

The company having been registered with limited liability no shareholder can, under any circumstances whatever, be made responsible for a greater amount than that of the shares to which he subscribes.

There are no special Articles of Association, Table A, under the Companies Act, 1862, having been adopted in its entirety, except clause 27, which has been altered, so as to ensure the attendance of a sufficient number of shareholders, to enable business to be transacted at the meetings of the company.

To insure subscribers from any loss which may arise should a sufficient number of shares not be subscribed for, the directors bind themselves to return the whole of the deposit money, unless at least one-half of the shares, exclusive of those to be paid to the vendor, are taken.

A considerable portion of the capital has been already subscribed.
Applications for shares may be made to the bankers, directors, solicitors, brokers, and the manager, at the office of the company.

REPORTS.

Report on the Roaring Water Mine by Capt. HENRY THOMAS, Manager of Crookhaven Mine.

June 2, 1862.—In compliance with your request, I have made a minute and special inspection of the Roaring Water Mine, and the following is my report thereon:—The mineral property of the Roaring Water Mine is situated in the parish of Aughdown (five miles from the flourishing town of Skibbereen) west division of West Carbery, county of Cork, a deep and well-sheltered creek flows up to the entrance of the mine, which stands at the head of the magnificent Roaring Water Bay. The extent of the various lodes on their courses—about east and west, averages half a mile, and from the northern to the southern boundary one mile and half. This mine was worked partially in 1842 and 1846, but as the proprietors were unable to carry out the proposed plan of operations for want of capital, and other causes, they were reluctantly obliged to abandon the undertaking. During the time the mine was worked an adit was driven in the great caunter 100 fms., the bearing of which is north-east and south-west. In this drive several promising lodes are intersected, one of which will more than pay the cost for driving; indeed, all of them are of the most flattering character, containing rich yellow and peacock copper ore, friable quartz, and gossan of the finest description, and from the soft nature of the ground in the vicinity where the caunter and east and west lodes intersect each other, several tons of rich ore were taken—these valuable discoveries remain untouched. An adit level, 6 fms. above high water mark, is driven east on Thomas's lode 14 fms., and a shaft sunk under the level 13 fms. on its course, at the depth of 7 fms., a level is extended 8 fms., about 6 fms. east of the shaft a cross-cut is driven north 5 fms., in driving the last 6 ft. rich purple and yellow ore is passed through; the north wall of the lode remains to be seen. Trail's lode is 2 fms. south of Thomas's lode, which is intersected by a cross-cut at the adit level, and driven on its course for several fathoms, and indicates a good lode in depth. Orchard lode is north of Thomas's lode, on which a level is driven east 12 fms., where the western side of the caunter is picked, but for want of means, before alluded to, the work could not be prosecuted; rich stones of caunter ore were broken at the point of intersection, and the ground is of the highest mineralized character; this lode presents features of more than ordinary promise. Independent of the ground opened and alluded to, several fathoms of drivings and sinkings have been effected with exceedingly good results; a cargo of good ore was raised, dressed, and shipped from the trials made; I may mention here that a large water-course is completed to the mine at a considerable expense. I consider the available work done for an incoming party could not have been effected for less than from £3500 to £4000. In addition to the lodes alluded to, a valuable lode is discovered north of the Orchard lode, and is sunk on its course 5 fms., and extended east 14 fms. This is one of the most valuable lodes that has come under my notice for a considerable time, and from its general composition I cannot but think it will prove exceedingly rich. This lode (Grady's) is intersected by the great caunter adit, where it presents equally favourable appearances. The dip of this and the Orchard lode is south, and the dip or declination of Trail's and Thomas's, and the intermediate lodes north; therefore a good shaft should be sunk in the centre position (see transverse section), so as to command the group of lodes in this division of the property. It is more than probable these lodes will join at or about 40 fms. from surface, where large quantities of copper ore may be expected. I have made a careful calculation of the expense for sinking a good permanent perpendicular shaft to the 40, and I find, including superintendence and every description of materials, it will cost £1050, but I am confident before this point is reached good courses of ore will be cut. Fifteen parallel lodes traverse this property to the south of the lodes before mentioned, on which very little has been done, but judging from their appearance no doubt can be entertained that they will prove equally valuable as those more particularly mentioned. No mine can surpass Roaring Water Mine in point of situation, the dressing-floor being on the quay, consequently the ore can be put on board in barrows from where they are dressed; this also applies to the importation of mining materials. A good stream of water is available, and calculated for crushing, stamping, hauling stuff, and dressing, which a valuable acquisition for carrying on mining operations. I may add to the facts adverted to, that there appears to be a valuable silica quarry on the property, from which several hundred pounds worth have been sold from a depth of 10 or 12 fms., and no doubt, if this quarry is properly opened, and efficiently worked, it would prove very lucrative to the proprietors. In conclusion, I beg to say, for carrying on future operations, I would recommend that a shaft be sunk in the position laid down in the transverse section to the depth of 40 or 60 fms.; also, at the same time, drive east on one of the lodes intersected by the caunter, where I consider a good quantity of ore can be raised at a profit to a company.

Report of Capt. PAUL, late of the Knockmahon Mines.

Aug. 13, 1862.—According to your instructions, I have inspected the Roaring Water Mine, in the county of Cork, Ireland, and I have now the pleasure to hand you my report. Several large and very promising lodes have been discovered in this highly mineralized tract of mining ground, which is of considerable extent, being about 1½ mile long by ¾ mile wide. Its advantages for carrying on mining operations are all that can be desired; there is a navigable river for vessels of 120 tons burthen up to the dressing-floors, and a good supply of water available for pumping, crushing, or other necessary operations. An adit level has been driven on the course of a very fine caunter lode for about 100 fms., and which has intersected in its course to this point six other lodes, varying in size from 3 to 6 ft. wide, composed of gossan, friable quartz, rich yellow, silver grey, and purple copper ores, and blue and green carbonates of copper. At the points of intersection with these lodes levels have been driven 4 fms. east on each, all of which have a remarkably fine appearance, and hold out great inducement for a vigorous prosecution of their development to a depth where those lodes underlying south will form a junction with those underlying north, which, from their present declinations, will be at or about the 60; but even before arriving at this depth, I have no doubt but rich courses of ore will be met with, as on Thomas's lode, on which a winze has been sunk about 13 fms. below the adit level, and a considerable extent of the lode worked away, from which a cargo of copper ore was raised and sold 20 years ago. The stratum throughout the set is light-grey slate, of a soft and congenial nature, and easy for exploration. From the highly mineralized character of the great caunter lode, before referred to, and the oblique angles of the lodes in close proximity to the large elvan courses which traverse the entire length of the set, and the junctions they will surely make with each other in depth, I have no hesitation in saying that you have all the essential elements of a valuable mine when sufficiently developed. I would recommend for the proper development of this mine to sink a shaft from surface, in the position indicated on the sections, as it is the most economical plan for all the lodes; it will intersect three of them at about the 60, where I anticipate great quantities of copper ore will be met with, as in many like cases where these very beneficial occurrences have proved so valuable in other mines. In conclusion, I have no hesitation in saying that I have a most favourable opinion of this property, and believe that when proved it will fall far below what I have said, and that you will have a valuable mine. I am of opinion the backs of the lodes contain gold, being of the same nature as those I have seen a great quantity of gold taken from in foreign countries, but I cannot speak from

actual proof, though I was shown a stone by a man on the mine in which particles of gold were discernible to the eye.

Report of Capt. CARTWRIGHT, of the St. Just United Mine.

Sept. 26, 1862.—According to your request, I have been to the Roaring Water Mine, and have had the pleasure to hand you my report thereon. I arrived at Skibbereen late on Friday night, the 19th inst., and went early on Saturday morning to the mine. Mr. Long, the proprietor of the estate, gave me all the information I required as to the extent of the set, which is very extensive, being on the course of the lodes east and west about half a mile. Of these lodes there are a great number, many of them having been opened sufficiently to show that they are copper-bearing lodes. There is also a caunter lode, running about north-east and south-west through the set, and which intersects the greater part of the east and west lodes. Two of the miners came from underground, and brought with them some fine stones of copper ore, which they informed me they had broken out that morning. I requested them to act as my guides, and they conducted me first into an adit, driven some 5 fms. above the sea level, on what is called Thomas's lode. I found this level extended east, from 10 to 13 fms., on a very kindly lode, from which I broke from the backs some good copper ore; for the last 12 or 15 ft. driving the lode is standing on the north side; and behind this is a winze sunk, but, as it was full of dirt, I had not an opportunity of seeing the appearance of the lode deeper. I ascertained, however, from reliable authority that there are good indications of the lode being productive in depth, as therefrom good yellow and peacock ores have been broken. I went into the deep, or sea, level driven on the caunter lode, which I found extended north-east from 100 to 120 fms. I carefully examined the lodes intersected; close to the end I saw what I consider one of the kindest lodes in the mine; on it the last workers had driven but a few feet, in what I consider a fine-looking position, 18 in. wide, with a good ground for driving. Some extraordinary circumstances must surely have caused the abandonment of this working. On the west of the caunter I was unable to see this lode, it being in timber ground. Between this and the mouth of the level I noticed five other lodes, two of them having a very kindly appearance, with good stones of copper ore. Seldom have I seen such lodes neglected, which could be so easily worked. The plan recommended by Captain Thomas and Captain Paul, of sinking a shaft to take these lodes at a lower depth will fully test and open up the property, and I can have no doubt but will prove equally successful as many of the mines upon this run of lodes. The advantages for working this mine are better than anything I ever saw. The finding, or winze, on the creek will be found of great value in the undertaking, for not only will you save the land carriage of materials, (a most important item in mining), but you will be enabled to run out the ore, dress it, and, with very little cost, put it on board ship.

Report of Capt. MARTIN BOUNDY, of Dublin.

Sept. 27, 1862.—Having examined the Roaring Water Mine, assisted by Capt. Henry Thomas, on the 22d inst., I beg to submit the following as my report:—It is my firm opinion that you have not only a fair chance in the common acceptance of the term, but you have tangible proofs of successful results in depth, in the general character of the lodes and veins at and near the surface. That I have no hesitation whatever in taking upon myself the responsibility of advising the necessary outlay for the effectual development of the mines upon a scale commensurate to the character of the indications presented. The plan suggested for the further development of the property I have carefully considered, but can offer nothing by way of amendment; the proposed plan of sinking a shaft in a central position of the set I approve, as when a sufficient depth has been arrived at to more fully lay open the ground ulterior measures can be adopted in strict conformity to the then existing features of the property. The work already done on the large lode, which has produced a fair quantity of good quality ores, and the long drive is valuable, inasmuch as it forms a key to a large section of the property; and it may be safely presumed that there can be no reasonable doubt that these lodes, which have given some results, and show such promising indications, will greatly improve in depth.

THE ST. CUTHBERT LEAD SMELTING COMPANY (LIMITED).

To be registered under "Companies Act, 1862," whereby the liability of the shareholders will be limited to the amount of their subscriptions.

Capital, £75,000, in 15,000 shares of £5 each.

Deposit on application, 10s. per share, and on allotment, 10s. per share.

Calls not to exceed £1, and not to be made at less intervals than three months.

DIRECTORS.

Lord M. W. GRAHAM, M.P. (Chairman of West London Land Company).
The Hon. T. L. HALIBURTON, M.P. (Chairman of Vancouver Coal Company).
Hon. Colonel R. T. ROWLEY, M.P. (Director of West London Land Company).
A. ALISON, Esq. (late firm of Allison, Merry, and Conningham), Glasgow.
Lieut.-Col. MONY (Director of the Canadian Native Oil Company).
JOHN REID MACKENZIE, Esq., Glasgow.

(With power to add to their number.)

AUDITORS.

Messrs. Cooper Brothers and Co., public accountants, 13, George-street, Mansion House.
Messrs. Faithful Cookson and Co., accountants, 55, Gracechurch-street, C.E.
BANKERS—The Imperial Bank, Lombard-street.

BROKERS—Messrs. Woolley and Coates, Tottenham-yard.
SOLICITORS—Messrs. Desborough, Young, and Desborough, 6, Sise-lane.
CONSULTING ENGINEERS—Messrs. Phillips and Darlington, Moorgate-street Chambers.
SECRETARY—J. W. Lambert Smith, Esq.

TEMPORARY OFFICES—17, GRESHAM HOUSE, OLD BROAD STREET.

PROSPECTUS.

This company has been established for the purpose of working the rich deposits of lead ore and slags occurring at the Priddy Mines, on the Mendip Hills, within three miles of Wells, in Somersetshire, where an accumulation of lead-producing debris, estimated at 600,000 tons, has been discovered, and which is calculated to contain at least £900,000 worth of that metal.

This large deposit is, doubtless, the remains of very ancient mining and smelting operations, and the old miners, having taken advantage of the locality, have evidently brought their ore to be washed and smelted on the banks of the rivulet which flows through the valley.

The quantity of ores thus brought, the imperfect means formerly available for saving the finer parts of mineral, and the large percentage of metal left in the old slags, have resulted in the accumulation at this spot of vast quantities of fine slag, mixed with fragments of slag, filling up the whole depression of the valley to a thickness in some places exceeding 30 ft., and extending over an area of 25 acres.

The improvements which have of late years been introduced in the washing and smelting of lead ore are such, that these residues of the ancients can now be rendered commercially available, and large quantities of metallic lead of the finest quality may be obtained; all that is required to insure this result being a sufficient amount of washing machinery and proper furnaces, under the direction of a practised smelter.

In this undertaking there is none of the uncertainty necessarily attending all mining operations. The question is simply one of washing, and subsequently smelting the produce of a deposit, the amount and yield of which are well known before commencing operations.

This property is situated only three miles from the railway station at Wells, and when the deposit has been all worked out, which, with vigour, can be accomplished in about 30 years, the land and works will all be the property of the company, and available for smelting ore from the adjacent mines.

The lease is for a term of 14 years, held under the Ecclesiastical Commissioners, renewable for ever, and the royalty only 1-18th, which is very small compared with the royalty on mines.

The machinery and appliances on the property are of newest and most approved description, and capable of producing about 40 tons of metallic lead monthly, but a small additional outlay will enable the returns to be increased to at least 100 tons monthly. The directors have been enabled to purchase the whole of the above very valuable property, together with all the machinery, dressing apparatus, smelting furnace, &c., for the sum of £65,000, and have reason to believe that it is capable of yielding an annual profit of at least £12,000 per annum for the next 30 years.

For a more detailed description of this property and its resources, the directors would refer to the reports of Prof. Ansted and Messrs. Hopkins, Ennor, and Phillips, which may be obtained at the offices of the company. In the event of the directors not proceeding to allotment the deposit will be returned in full.

Full prospectuses and forms of application may be obtained at the temporary offices of the company, 17, Gresham House, Old Broad-street.

THE SOVEREIGN GOLD MINING COMPANY (LIMITED).

Completely registered.

Incorporated under the Joint Stock Companies Act, 1862-67.

Capital, £50,000, in 50,000 shares, of £1 each.

Deposit on application 5s., and 5s. on allotment.

DIRECTORS.

RICHARD HALLETT, Esq., 20, St. Helen's-place, Bishopsgate.
CHARLES ROBERT ESSEX, Esq., East India Chambers, Leadenhall-street, City (Director of the Worthing Mining Company).
HENRY JORDAN, Esq., 7, Albemarle-street, Piccadilly.
CHARLES FOXON COOKE'S FOXON, 7, Sutherland-place, Piccadilly.

BANKERS—The City Bank, Threadneedle-street, City, E.C.
SOLICITOR—D. P. Hindley, Esq., 10, Old Jewry Chambers, City, E.C.
SECRETARY—Mr. Henry Post.

OFFICES—10, OLD JEWRY CHAMBERS.

ABRIDGED PROSPECTUS.

This company is formed to purchase and work for gold an extensive mineral property in North Wales, about three miles from Dolgelly. It comprises nearly 400 acres, and immediately adjoins the Prince of Wales Gold Mine, and the Imperial. The celebrated Clogau and the Cambrian Gold Mines are a little to the west, other mines are in continuation eastwards. The rich lodes operated on in all these mines are identical in character with those in the Sovereign Gold Mine. The set contains several known gold-bearing lodes, one of which is the largest in the district. There are great facilities for working by adit levels when the outcrop is worked out, but which will last many years, with a never-failing supply of water-power, sufficient for all purposes.

Several tons of quartz have been broken from the main lode lately, from the greatest depth attained, proving highly auriferous. The following are the results of assays of the same made by Messrs. Longmaid and Lisabé:—

City Laboratory and Assay-office, 31, Throgmorton-street, London, Sept. 4, 1862.

I hereby certify that I have examined three samples of quartz received from the Sovereign Gold Mine, and that they contain as under:—

No. 1.—Lead	24 per cent.
Gold	4 ozs. 15 dwts. 16 grs. per ton.
No. 2.—Gold	2 ozs. 5 dwts. 17 grs. "
Silver	0 ozs. 9 dwts. 19 grs. "
No. 3.—Gold	7 ozs. 0 dwts. 11 grs. "
Silver	0 ozs. 15 dwts. 14 grs. "

(Signed) JOHN LONGMAID.

Sept. 18, 1862.—The specimens of gold-bearing quartz from the Sovereign Gold Mines I have ascertained contain over 8 ozs. of gold to the ton of ore, of 30 cwts.

(Signed) FRANCIS LISABÉ.

Since the above results were obtained, a deputation from the board of directors have visited the mine, and the following result obtained from quartz broken by them out of the main lode at the surface.

Assay-office, 77, Hatton-garden, London, Sept. 26, 1862.

The samples of quartz from the Sovereign Gold Mine have been carefully crushed and assayed, and found to contain the following proportions of gold, silver and lead:—

Gold	1 ozs. 12 dwts. 0 grs. per ton of 30 cwts.
Silver	3 ozs. 5 dwts. 12 grs. "
Lead	43 per cent.

(Signed) JOHNSON, MATTHEW, & Co.

A statement of the financial position of the company will be forwarded to the shareholders every three months, and general meetings held half-yearly.

Detailed prospectuses, reports, and plans, with forms of application for shares, may be obtained at the offices of the company, where specimens of the gold quartz broken at the mine may be seen.

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By ROBERT HUNT, F.R.S., F.S.S., Keeper of Mining Records.

These Statistics include returns from all the mines of tin, copper, lead, zinc, and iron pyrites. The quantities of iron ore raised and of iron made are given, together with the production of each coal field and the distribution of the coal. In addition, such miscellaneous information respecting metalliferous minerals entering into commerce is given.

APPENDIX TO MINERAL STATISTICS FOR 1861.

This Appendix includes lists of all the metalliferous mines of the United Kingdom, with the names of the owners, thus forming a complete mining directory.

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By WILLIAM TRUBNAR, C.E., Formerly Engineer at the Down's Ironworks, under the late Sir John Guest, Bart., subsequently at the Hylwin and Forest Works, under Mr. Crawshaw.

Second edition, revised from the manuscript of the late Mr. Trubnar.

By J. ARTHUR PHILLIPS, Author of "A Manual of Metallurgy," "Records of Mining," &c.; and

W. H. DORMAN, C.E.

London: E. and F. N. Spon, 16, Bucklersbury.

A CAUTIOUS MAN.—Many speculators in mines having written

to the writer of the letters signed "A Cautious Man," asking him if it would be agreeable to him to transact their mining business for them, and to give them information when he has, by his inspecting agents, fixed on a good mine to speculate in, informs them, and the public generally, that he will have no objection to act as a broker for them in any mines he may recommend, but in no other way.

He has taken office in the City, and will be happy to see any clients who may favour him with their mining business.

He will with pleasure give his opinion to parties holding shares in British mines, as to the advisability of keeping or disposing of their stock.

Those speculators who may entrust him with their business may rest assured that he will make purchases for them in none but good mines, such, in short, as the most experienced mining inspectors in Cornwall would acknowledge to be good. The bulk of calling mines (with but few exceptions), and the trash, he will leave to others to speculate in.

By his system, and by following his advice, he is confident much money may be made in mining. "A Cautious Man" will get most mines in Cornwall inspected by a truthful and experienced agent

THE MINING JOURNAL.—As a shareholder in this company I cannot refrain from saying that, if really desirous of obtaining information, he would do well to seek it of the managers, and in preference to writing to the Journal. I have no objection to the managers, of the secretary, and at the mine, and in any way to complain of the reception I have met.—ONE WHO HAS BEEN THERE, AND FEELS SATISFIED.

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in unison in their endeavours to utilise the dormant capital of profits for the benefit of the community. To-day we open this subject anew, and hope to return to it again.

In another column of this day's Journal we publish the prospectus of the ROARING WATER MINING COMPANY, which is considered to be one that not only deserves attention, but may safely lay claim to support, both on account of its intrinsic value, from its proximity to our own shores, and the increasing intercourse and sympathy that is daily drawing nearer together the bonds of relationship between the two countries. Ireland opens a wide field for the miner's skill, and the highly profitable employment of capital. So far as she has gone in the development of her resources, unexampled success has attended her explorations. Look at Berehaven, Holyford, Knockmahon, Ballycummisk, and the Wicklow Mines; on small capitals enormous returns and profits have been realised. We have often expressed our surprise that this field for mining enterprise has been allowed to lay so long unexplored, and that public taste has been led to seek in foreign lands those precious gifts of Nature that may be obtained at far less cost, risk, and danger in the Sister Isle.

The prospectus offers strong temptations to embark in the undertaking, which is described as so fair, and so full of promise. The reports are from sound practical men. A large amount of work has been done, which is a great advantage to the present company, both as to capital and time. Highly-promising lodes of rich purple and yellow copper ore, silver, malachite, and gold have been discovered there. The district, the southwestern part of the County of Cork, is now bursting forth into prosperity, and these mines form a part of the same lodes. The parties who have brought forth this undertaking are well-known and tried men, honourable in character, of sound business habits, whose sole object will be to carry on the concern on sound practical principles; and this last point is so essential an element in the good management of mines, that all shareholders connected with property of this description should see that they have a good guarantee for this in their boards of directors, for there has recently been brought to light instances of parties who have got the lead in some undertakings, and their management has been in every direction but the right one, to the great sorrow and loss of the shareholders.

There has been at times some hesitation to subscribe to Irish undertakings, but this feeling is now almost absorbed by the great intercourse between the two countries. There is nothing that can add more to the prosperity of Ireland than the development of her mineral riches, and there is nothing can be more tempting to English capitalists than a fair prospect of profitable returns.

SPONTANEOUS COMBUSTION IN COAL MINES—No. III.

In the course of the discussion questions were asked as to the best method of preventing spontaneous combustion underground, and the most efficient plan of extinguishing it when it occurred. On the former part of the subject Mr. Woodhouse gave some interesting explanations. He stated that it was quite practicable to work a part which was subject to spontaneous combustion, if the air were allowed to pass through it in considerable volume. In the particular part of the colliery under discussion, where the greatest liability to spontaneous combustion occurred, the current of air would pass at the rate of between 20,000 and 30,000 cubic feet per minute. Mr. Stuart Smith said that in the Warwickshire coal field it was always asserted that a great quantity of air, decomposing the shale and pyrites in the goaf, was one great cause of spontaneous combustion. He found, however, in practice that introducing a large quantity of air along the edges of the goaf, so as to dry up the moisture coming from the mine and goaf, tended rather to diminish spontaneous combustion than otherwise.

With reference to the method of extinguishing a fire spontaneously ignited, Mr. Darlington said that his own experience was that the best thing was to shovel it out altogether, if it were possible to do so; but where that could not be done, the gob face should be covered with sand or clay, in such a manner as to exclude the air. Mr. Woodhouse expressed an opinion that not many fires were got completely out in that way. These fires commonly occurred inbye, and were indicated by the steam thrown off from the heated moisture on the roofs. As soon as they perceived by these appearances where the fire was they proceeded to scour it out, and when that was done they filled up the space with sand and other stuff, which was found to be better than any other materials, and they then put the refuse back, because after it had once been burnt it was less liable to become heated again. This refuse was faced with clay, and the bottom being well packed up, to exclude the air, there was an end to the thing. The President, Mr. Nicholas Wood, summed up the discussion as follows:—

Our experience [in Northumberland and Durham] in reference to spontaneous combustion is very limited. The only well-authenticated case that I know of occurred at Killingworth. It was a case in which the mine was worked by the pillar and stall method, and the pillars of that day (about 30 years ago) were left extremely small. Several partial creeps had taken place between the packing up and the roof, which very nearly filled the spaces where the coal was taken out. A considerable quantity of small waste was left in the old workings—probably about one-sixth of the entire mass of coal that was taken out,—and in that state that portion of the mine was shut up for several years, during which time it became filled with water. We had occasion recently to take the water out, for the purpose of going into that district. When we went into it we found it extremely warm—very much beyond what its natural temperature ought to have been; and in opening out the old workings further we found masses of scoria as compact as any metal, showing that there had been a fire there of very considerable extent. That certainly had, in my opinion, been caused by the decomposition of the pyrites which was mixed up with the small coal that we had formerly been in the habit of leaving in the bords or stalls. The coal which has been alluded to is a free-burning bituminous coal. With respect to the steam coal of the North, I believe that a large quantity of the small coal is left underground, but I do not myself know of a single case of spontaneous combustion of that coal. With respect to the opinions which have been expressed here to-day, they certainly appear to me to be somewhat at variance with each other. What occurred to me, as to the chemical constitution of the coal of the Moira Colliery, and the statement made by Mr. Woodhouse, that it was not a white ash coal entirely, but that part of the seam is a brown ash coal, is this:—I am inclined to suppose the brownness of the ash must be the effect of an admixture of iron. I believe that it is a general indication of the presence of iron in coal when it burns to a reddish or brown ash. This shows that the seam in its chemical constitution contains iron, and is, consequently, liable to decomposition, although, generally speaking, it is an open burning coal. The consideration of this subject forms one of the class of enquiries yet requiring further development, which I took the liberty of mentioning in my opening address to the meeting. It is a subject into which it will be necessary to go a great deal further. We must enquire more closely into the chemical constituents of the coal; and I hope that after our attention has thus been directed to the subject, and after the lengthened discussion which has taken place, we shall, at our next meeting, be able to throw more light upon the question at issue, and probably ascertain, in the end, from what spontaneous combustion arises.

The next matter brought before the meeting was the method of working the Thick or Ten-yard coal of South Staffordshire, a paper being read on this subject by Mr. Henry Johnson, of Dudley, who, under the head of "Fire-Stink," mentioned the remarkable tendency to spontaneous combustion shown by this coal, and the difficulty of working it in consequence. He had found in practice, he said, that if when the gob commenced to heat they dug holes in it, and scattered it about, it would grow cool, and not fire again. Having read his paper, he asked if Mr. Blackwell was aware that the hardstone and parting contain a large quantity of pyrites, of the same kind as that said to exist in the thick coal of Staffordshire? He knew from experience that if they put the small refuse slack under a heap of hardstone it would fire sooner than if placed at the top. It seemed to him that the exposure to air and wet effected some chemical change in the coal refuse. The hardstone and parting would sweat, and give off an acid, or a salt, the same as iron pyrites. Mr. Blackwell replied that this was one of the exceptions. He did not say that pyrites when subject to the wet was not a source of fire, but what he wished to convey distinctly was his opinion that the tendency of certain coal seams to fire did not arise in a principal measure from the presence of pyrites, but from the chemical constitution of the coal itself.

We have now placed the leading points in this important discussion before our readers, in the hope that a more extended publicity than can be obtained for it in the volumes of the "Northern Mining Institute Journal," may induce scientific engineers to investigate the subject, and inform us of the result of their experiments. We think it scarcely creditable to mining science that a process so often seen as that which we have been considering should be so little understood, and we invite correspondence—brief, terse, and to the point—on the subject.

MINERAL TURPENTINE.—At the present time, when vegetable turpentine is realising an enormous price in the market, it may be well to direct attention to an article which is a most perfect substitute for it, and can be supplied in any quantity at scarcely more than one-half the price; we allude to mineral turpentine. Mineral turpentine has all the properties of the best spirits of turpentine of vegetable origin, and can be used precisely in the same manner either by the painter or the varnish maker. As a varnish makers' spirit it is found to be an excellent solvent for all the materials

employed, whilst to the painter it has the recommendation that it mixes thoroughly with oils, turpentine, &c., and flats perfectly. The mineral turpentine is being manufactured and sold in large quantities by the Hydro-Carbon Oil Company, and appears in every case to give the greatest satisfaction. The low price at which the new material can be sold is readily accounted for by the fact that it is obtained as a bye product in the manufacture of another article; and, as the odour is considerably less offensive than vegetable turpentine, the demand for it cannot fail constantly to increase.

THE NEW MOVE IN THE YORKSHIRE IRONSTONE DISTRICT.

We beg to call the attention of ironmasters and commercial capitalists to the important movement now being made at Helmsley and Kirby Moorside to put the southern, and by far larger, division of the great colliery district of the North Riding into communication with the Yorkshire sea-ports and the railway system of the North-Eastern. A meeting of the provisional committee was held at Helmsley, on Nov. 7, which was presided over by the Hon. William Duncombe, M.P., eldest son of Lord Feversham. We are given to understand that sufficient capital has been subscribed by the landowners and inhabitants of the above-named towns to enable them to apply for a bill this session of Parliament, so that there is reasonable certainty within a year's time that the projected railway of only ten miles will be far on its way towards completion, there being no opposition whatever. The North-Eastern have declared their readiness to work the line at cost-price, but declined taking shares, or advancing money. This places the new line in an independent position, and will enable it at some future time to make the best terms for amalgamation, either with the North-Eastern itself or the Great Northern, should this latter company ever be compelled to extend their main line to the Durham coal fields and the Tees, through Bilsdale, by the necessities of the coal trade to London and the South. The iron and mineral district, which will be opened out by the Helmsley and Kirby Moorside Railway is a block of about 24 square miles, intersected by four deep narrow valleys, known as Bilsdale, Bransdale, Farndale, and Rosedale, and the ironstone seams crop out on both sides the whole of their length, so that they can be worked by levels at small expense; and the country abounds throughout in timber, limestones, freestones, and clays. It is remarkable that the lower ends of these dales contain commercial iron ores which are not found in Cleveland, one of which, the famous seam of Rivaux Abbey, was only re-discovered last week, about a mile from Helmsley. It is a calcareous oolitic carbonate, very tractable, and containing generally about 30 per cent. of metallic iron. As the valleys rise towards Cleveland other marketable seams of ironstone come into view, one of which contains the Rosedale magnetic ironstone, now making the fortunes of the lucky adventurers, and giving a high character to the brands of the North, as mentioned in our Journal a fortnight ago. We, therefore, think we are doing good service to the ironmasters of Staffordshire, and of other districts now being exhausted, in making them acquainted with the prospect before them, and in putting them on a par with local parties, so as to enable them to secure by timely diligence and enterprise some of the great prizes of the Yorkshire iron fields which this new railway will open out to public competition.

REPORT ON CORNWALL AND DEVONSHIRE.

[FROM OUR CORRESPONDENT IN TREURO.]

Nov. 13.—The new Joint-Stock Companies Act, which came into operation at the commencement of the present month, and which is supposed to amend some of the recognised imperfections of former Acts, may be expected, I suppose, to give a new impetus to limited liability companies. Although many of the most important and respectable mining and metallurgical establishments in various parts of the United Kingdom are worked most successfully under this system, it is remarkable that hitherto in Cornwall it has never been brought into successful operation, while the Minera Mines, the Wicklow Copper Mining Company, Messrs. Taylor's mines in Wales, and hundreds of other enterprises of a like high position and standing, are found to work satisfactorily with limited liability. The system is still regarded in Cornwall with distrust and dislike; and, judging from the experience we have had, this is not very much to be wondered at, for, as a rule, the companies of this class which have made their debut in the county have either been the bubble conceptions of penniless adventurers, or have been started by men who, although doubtless respectable in their own sphere, were utterly ignorant of, and consequently incompetent in, mining affairs: in the result, the feeble respectability of the latter has generally ended quite as disastrously as the knavishness of the former. At the same time, it is a notorious fact that there is a large number of substantial people who will only enter on joint-stock speculations under the guarantee of limited liability, and who will consequently not invest in cost-book mines. For my part, I think these persons are wrong, for I prefer holding shares in a cost-book mine to a limited liability one—at least, as the latter are usually constituted; assuming, of course, that the cost-book mine is conducted on the real Cost-book System, as all respectable Cornish mines are. But as we must deal with men as we find them, and as there is a wide-spread feeling among substantial people in favour of limited liability, it does not seem to me wise or prudent to exclude them and their capital entirely from Cornish mining. The new Act allows the widest latitude as to detail, and there really seems no reason why a company, with articles embodying all the details of the Cost-book System—so admirably suited to mining—simply adding the principle of limited liability, should not be found to work. In my experience, the great failure of limited liability mining companies has arisen from the nature of their articles—too cumbersome to work well in carrying out a mine, however suitable they might be for an ordinary joint-stock company. Drawn up generally by lawyers, they are full of the quips and cranks characteristic of everything emanating from the profession. In business matters generally, except in extreme cases, lawyers can happily be dispensed with; and the great advantage of shares and other money securities, compared with real property, is that in touching the latter we must bear with the inevitable lawyer—at least until Lord Westbury's new Registration System gets rid of him. If, throwing lawyers overboard, two or three men of business conversant with mining would sit down and draw up in plain English a set of rules embodying as nearly as possible the true Cornish Cost-book System, I see no possible reason why a company adopting such rules could not be successfully worked. My own impression is that such companies would work well, and they certainly would have the advantage of recruiting shareholders at present excluded by the dread of unlimited liability from the field of Cornish mining enterprise.

Two new companies are either started, or are about to be started, whose object, I understand, will be to endeavour, to some extent, to carry out these views. It is evidently desirable that they should be successful, for if they are, a class of capital hitherto excluded from Cornwall will flow into it, to the benefit of both the county and the investors. The companies I refer to are for working WHEAL PRUDENCE, in the St. Agnes and Perran districts, and TREGURTHA DOWNS AND OWEN VEAN MINES, in the Marazion district.

Wheal Prudence is situated on the north coast, in the parish of St. Agnes. The lodes principally worked hitherto are parallel to, but to the south and ½ mile to the west of, the lodes of the Great St. George Mine: they have been explored to the depth of 62 fathoms below adit, and have made very considerable returns. A 70-inch engine is now nearly erected, on a new perpendicular engine-shaft, which is completed to the 62, and has to be sunk 12 or 15 fathoms more to intersect the lode. From the circumstances under which the mine was last abandoned, and the reports of the state of the bottom levels, this engine lode seems an excellent speculation. The principal feature, however, about this mine will be the cutting of the western continuation of the St. George lodes, which lie out to sea to the north. As these lodes made eastward one of the richest runs of mines in Cornwall, their exploration westward is evidently a matter of considerable interest. In the last working of Wheal Prudence the failure of the mine was undoubtedly due to an immense expenditure, and loss incurred in a most injudicious attempt to work these seaward lodes, by direct workings from a detached and storm-beaten island rock, instead of by cross-cuts, which can be driven comparatively economically from the great north and south cross-course, which intersects the mine. Considering the geological position of this mine, in immediate connection with the granite of Cligga Head, with numerous lodes, veins, and cross-courses, and kills of the most congenial character, as far as the mine is concerned there is every prospect of success. Mr. Campbell Thomas, of Penzance, whose family is well known in connection with Cornish mining, has been the pioneer of this concern. The manager is Captain Joseph Vivian, late of Condurrow, a son of Capt. Nicholas Vivian, and nephew of Capt. Joseph Vivian, of North Roskear.

Tregurtha Downs and Owen Veian Mines are in the parish of St. Hilary,

THE MINING JOURNAL

Railway and Commercial Gazette.

LONDON, NOVEMBER 15, 1862.

Associated Capital and Limited Liability is our theme—or, in other words, Capital, Skill, and Labour Associated. Trite aphorisms these appear to be now most of ADAM SMITH'S great truths; but they are not less real on that account. No doubt many causes operate against the carrying out of such ideas, however practical they may be; but the obstacles are, for the most part, imaginary, or exist in theory much more than in fact. In our age, and in our wonderfully constituted commercial and trading communities, there are, and must be, bubbles rising up to the surface of our ocean of speculation, especially when there is a lull on that ocean, and many little barques venture out not sea worthy. These are to be swamped in the first breeze that overtakes them, with an unrelenting hand at the helm, and novices at the oars. So they come out, and go down. This we opine may be taken as a not very inapt retro-spect of the many "fine investments" which tempt the small capitalist in the morning, catch him too often midday, and leave him, if not a better, wiser man on his pillow at midnight. But the puny, albeit bold, speculator which are daily offered to a too confiding public to do this, that, or the other by means of associated capital and limited liability only, are like men using the cover of religion for rascality, how a great, bold, and world-wide power of developing the industry of man and of his resources may be abused and traded upon for a time—alas! for too long—to the detriment of really useful and profitable operations. For JONES, and ROBINSON, in the east end (not to go out of the metropolis) are caught by the names of great nobodies in the west—the Lord NORWICH and the Hon. Mr. DODGINS; yet this is all a mere ruse, for which that most respectable, but sometimes veridically honest old gentleman, Mr. JOHN BULL, has chiefly himself to blame. To chase banter, and to come to the more solid view of the case, which is the essence of our material character, how is it that so far as a nation, and we believe, as a whole, the greatest nation now existing, we do not use more fully the surplus capital lying actually broadcast throughout the great city alone, for the benefit of the holders of this surplus, whether large sums or small, and it is not too much to say for the industrial development of the world in manufactures and commerce, with the consequent benefit to mankind? Simply because individually our energetic and enterprising citizens, merchants, traders, *et hoc genus omnes*, are so absorbed in their own peculiar avocations that they do not step out of their own little sphere, but leave to others to promote speculation, content if the "Noswhos" "Doddgins" honour the speculations with their patronage (blessed mark!) How is it that, with so much of capital locked up, and so much of men, both scientific and practical, available for the direction of such concerns, such as collieries, mines, ironworks, &c., we neglect to utilise ourselves of their services, and put ornamental names on our directors? And how is it to be expected that such undertakings can succeed where there is no knowledge to direct or control the operations? We know that at home and abroad fortunes have been lost in joint-stock speculations from this very cause; but we also know of innumerable fields of investment where, if associated capital be brought into action under a qualified and responsible direction, great profits may be reckoned upon almost positive certainty. The great secret, however, is in this:—that the management; guided well and assisted, in each department, by competent skilled subordinates. Great labour-giving and money-giving operations may be carried on by means of associated capital under limited liability, provided always that the lawyers be kept out of the management, and that the whole be carried on in good faith. In the preface to the admirable "Dictionary of Arts, Manufactures, and Mines," we are told that one of the chief objects he had in view in compiling the book was to teach capitalists who may be desirous of placing their funds in a productive branch of industry, to select judiciously among plausible "speculations." There is nothing more important than this class of education for our capitalists generally. But how essential it is for those who are to be directed to know fully the details of the industry they are to promote. In the United Kingdom, where mental and manual labour is so granted and diversified by the Allwise, as if to epitomise the progress of the world; and where each branch of industry, manufacture, and commerce is so knit together and blended with others, it behoves all to work

on a set of lodes running parallel with those of Tolvadden and Wheel Jewell, and caunter to the Wheel Prosper run. Tregurtha Downs is only 60 fms. deep, and when last worked, about thirty years ago, was drained by a 36-in. engine, which shows that the water was not considerable. The ground has been very favourably reported on by Mr. Abalom Bennett, of Tolvadden; Capt. John Daw, of Carn Brea; Capt. William Roberts, of West Basset; Capt. John Curtis, tollor to Mr. J. J. Rogers, M.P.; and Capt. Benjamin Gundry. There are several lodes in the set, intersected by elvans and cross-courses, many of which are still almost wholly unwrought. From the reports of some of the agents mentioned, and many other persons, when the mine was last abandoned there was a great deal of ore and tin ground left standing; and Captain Gundry mentions that shortly before the stoppage of the mine a rich bunch of copper was cut in the gossan, from which the men got 700 lb. a month; he thinks this is the top of a new bunch, which will be easily cut in driving the deeper levels under it. But these sets are, after all, evidently as much tin as copper mines, and comparatively little attention was paid to the former at the last working, in consequence of the low price of black tin, which averaged from 40s. to 45s. per ton. This is clearly shown by the burrows, which are full of tin in some places. As in the last working a 36-in. engine was wholly inadequate for the proper exploration of the mine, and as it was worked in connection with others in the neighbourhood, and after all, when stopped, was never intended to be finally abandoned, it seems clear that, with present prices of metal, it ought to afford an ample scope for successful mining adventure.

As this concern will be started under the management of Messrs. Dunsford and Ranken, and will include among the direction gentlemen not only of respectability, but of some mining experience, we may hope that in this case also the limited liability system in Cornwall will receive a fair, indeed a favourable trial. With success in these cases we may expect to see its wider adoption in certain mines, without at all interfering with the Cost-book System; the county affords sufficient room for both.

I find that I have been the object of some violent attacks, in consequence of my observations in last week's Journal. I care little for this, for my position in the mining world is not dependent on the opinion of any party of share-jobbers. I wish now to repeat that what I wrote was a *deliberate opinion*, which I have entertained and expressed for months; and that it is, besides, the opinion of every person I have ever met in this county. I wrote it with a full sense of the responsibility I incurred, and by the result of it I am willing to stand or fall in the face of the mining world. I may say, however, that my object was not to refer particularly to East Caradon; I only took that mine as the most noticeable instance of a pernicious system—a system which makes one ashamed of the very name of mining, while it desolates hundreds of homes. With regard to those who recommended East Caradon shares at 50s., as one of the best investments of the day, the most charitable excuse is utter ignorance of what they talked about—an ignorance so dense that it might be felt.

REPORT FROM MONMOUTH AND SOUTH WALES.

Nov. 13.—The district is gradually feeling the effect of the late improvement in trade, and commercial matters generally look promising. Much has been said and written respecting the increased activity in the Iron Trade, and it is satisfactory to announce that there are practical instances of improvement within the last few days. A short time since the Llynvi Iron Company purchased the Maesteg Works, which had been at a standstill for a long time previous. The works have now commenced operations, and a considerable number of men are employed. The Ebbw Vale Company have put another furnace in blast at their Abercynon Works, which is the second furnace lighted within the past four months. Better employment is afforded at the Pontypool Works under the new management, and Messrs. Bailey are rebuilding an old furnace at Beaufort, which will be lighted immediately it is completed. There are unmistakable signs of a revival in trade, and the prospects of the winter are encouraging. It may be well to give a hint that too much haste in lighting additional furnaces may so increase the supply as to seriously interfere with the present demand, but no doubt the ironmasters have made their calculations as regards the future, before extending their means of supply. The Coal Trade has also received a considerable impetus, partly from the activity at the ironworks, and partly from a better enquiry, especially as regards house and gas quantities. A large quantity of coal and coke is now being sent from this district to Staffordshire, where it is used for smelting purposes. Several of the local coalmasters have made contracts with Staffordshire firms to supply them with coal and coke, and but little will be shipped by these parties henceforth. As a natural consequence, there is more difficulty in procuring coal at the different ports, and vessels have to wait longer than usual before completing their cargoes. The output, however, can easily be increased at many of the collieries, and the difficulty experienced in getting coal will only be temporary. This clearly shows that the trade is gradually reviving, and the general opinion prevails that the revival will be a permanent one. The water has been cleared from the Machen Colliery, and the pit is in full work again.

It is reported that the Gifford coal property, Ely Valley, will shortly be energetically worked by a private gentleman. It will be remembered that a company was got up some time since for the purpose of purchasing and working the property, under the title of the Gifford Colliery Company. They commenced operations, but as it would be useless to proceed without making arrangements for a siding to the Ely Valley Railway, everything was stopped in a few weeks, and matters have remained in the same state ever since.

Great efforts are being made throughout the district to assist the distressed cotton operatives. Public meetings have been held at Newport, Cardiff, Swansea, Llanelli, and other towns, and the aggregate contributions amount to several thousand pounds. Committees have been appointed at each place, with the view of making a personal canvass, and the result will, no doubt, prove highly satisfactory. The colliery, miners, puddlers, &c., are contributing their mites, and it must be admitted that the district generally has shown a praiseworthy spirit on behalf of the Lancashire people.

At the Swansea Police Court, on Friday, a young girl named Mary Cochrane, was charged with having stolen a quantity of iron plate, the property of Messrs. Bath and Son. The offence was clearly proved, and Inspector Dunn remarked that such cases were of frequent occurrence. The prisoner was committed for six weeks to the House of Correction.

The arrivals at Swansea include—the Cornwall with 750 tons of copper ore for the Cobre Mining Company; Pearl from Jersey, with 5 tons of yellow metal for Williams and Foster; Abel from London, with 58 tons of copper ore for order; Adela from Torquay, with 300 tons of brimstone for J. Pollard; Ocean Queen from Rouen, with 57 tons of copper ore for H. Bath and Son; Eleanor from Genoa, with 150 tons of copper ore for H. Bath and Son; Paul from St. Malo, 214 tons of zinc ore for Rowlands.

NEATH HARBOUR.—Abstract of the trade of the port of Neath (including the Briton Ferry Docks), for the month ending Oct. 31:—

	No. of vessels.	Tons registered.	Tons burthen.
European trade.....	18	1,379	2,168
Coasting trade.....	190	14,235	22,532
Total.....	208	15,714	24,700

Imports.—Copper ore, 2829 tons; pig-iron, 741 tons; iron ore, 3987 tons; grain and flour, 627 tons; pit and cord wood, 372 tons; timber, 334 tons; miscellaneous, 408 tons; total, 9298 tons.

Exports.—Coal, coke, and culm, 19,083 tons; copper, 228 tons; bar-iron, 1171 tons; tin-plates, 291 tons; miscellaneous, 246 tons; total, 20,929 tons.

THE SOUTH WALES SHIPPING PORTS.

The late boisterous weather has had a most material effect upon the shipping trade of the ports of South Wales, and whether compared with those of the previous months of the present year or with the corresponding month of 1861, there is a great falling off in exports of both coal and iron.

CARDIFF, being the chief port in the Bristol Channel for exports, has suffered proportionately the greatest. From the monthly statistics, just published, we find that during the past month 360 vessels cleared out from the port, as against 385 the previous month, or 25 ships less than in September. The exports last month were 100,923 tons of coal, 9811 tons iron, 1566 tons patent fuel, and 610 tons of coke, being a decrease upon every article as compared with the corresponding month of 1861, and a decrease of 36,000 tons of coal, and 8000 tons of iron, as compared with the previous month of September. The trade of the port, however, has shown such buoyancy during every month of this year, that the aggregate export trade is considerably in advance of either 1861 or 1860. We find the total exports for the first ten months are as follows:

1862.....	1,108,716 tons coal	117,678 tons iron.
1861.....	940,275 " "	148,110 " "

From the present appearance of the docks, we have reason to believe that the temporary depression has passed, and that the exports of iron and coal for the current month of November will be at least equal to that of the corresponding period of 1861.

NEWPORT.—Notwithstanding the trade of this port during the half-year ending June last has been characterized as being equal to any of the previous, we are seriously afraid, as we have before remarked, that there is a gradual falling off, and that unless the Dock Company and the merchants and traders of the port put their shoulders to the wheel, and make a united effort to retrieve its trade, a more sensible decrease will soon be manifest. From an intimate knowledge of the port, we can see no reason why it should not be the chief, or at all events the second, port in the Bristol Channel. It formerly had a good import trade, and was eagerly sought after by merchants generally as a port of easy access, and having railway communication with several large and important inland towns. As a port of export, it has facilities for the discharge of vessels second to none, and upon an emergency vessels of 800 or 900 tons burden have been loaded and dispatched within a few hours. We cannot, therefore, divine the reason why Newport is slowly but surely losing ground in public estimation, nor can we account for the apathy of its governing bodies, or its merchants and traders. We are seriously afraid the Dock Company has much to answer for in this respect, and that their policy is not the good of the public and the port, but how to screw out the largest dividend. It is said that large public bodies move slowly, and that this is a truism will be seen from the fact that the half-yearly accounts of the company, ending June 30 last, have just made their appearance. From this statement we glean that 67011. 10s. 11d. had been received during the half-year for tonnage and wharage; 8421. 7s. 3d., for the removal of ballast; 5661. 13s. 6d., for the use of coal machine and crane; railway tolls, 2641. 8s. 8d.; the total receipts being 78311. 5s. 8d.; the total expenditure, including interest, being 56881. 13s. 4d.—leaving 19221. 12s. 1d. to be carried to the general revenue account. The revenue of the company shows an increase as compared with the corresponding half of 1861 of 8457. 19s. 11d. This statement of the receipts and expenditure of the harbour was laid before the general half-yearly meeting of the Dock Company, held on Thursday last; and in the course of the discussion which ensued it was contended that this increase was not at all satisfactory, for in the first place 1861 was

the most disastrous year the dock ever had, and, therefore, it was not fair to make any comparison with that year; and, secondly, that neighbouring ports had increased far more proportionately, and that the increased receipts just mentioned were not such as should fairly have been looked for, considering that the new docks were opened about four years ago. The Chairman of the Dock Company (Mr. S. H. Homfray) during the discussion said that when the docks were opened, some four years ago, it was naturally supposed that trade would increase, but it had fallen off. Formerly the American trade alone was about 70,000 tons a quarter; that was now nearly all lost, it being now only about 25,000 tons. With respect to the exports during the past month, the statistical returns have not come to hand, but the general belief is that the exports to foreign countries have not been so large as during the previous months, but there has been a good stroke of business done in the coasting trade, and, therefore, the returns will probably be equal, if not slightly in excess, of the previous months. The port, however, has not increased either in its imports or exports to that extent which was fairly anticipated, nor proportionately to other ports in the Bristol Channel.

SWANSEA.—This port has also suffered during the past month from the heavy gales and the general depression of trade. The depression, however, is only temporary, and the returns of the past month cannot fairly be taken as an index of the usual trade of the port. From the statistics just published by the Harbour Trustees we find that during the past month of October 416 vessels, with an aggregate registered tonnage of 48,655 tons, entered the port, and the total amount of shipping rates received was 11721. 19s. 6d. Of this number 209 vessels were engaged in the coasting trade, 188 vessels in the European trade, and 19 in the foreign trade. Compared with the returns of the corresponding month of last year there is a considerable decrease. In Oct., 1861, the number of vessels entering the port was 466, with an aggregate registered tonnage of 53,158 tons, showing a decrease during the past month of 50 vessels, and 4593 tons. The whole of this falling off is in the coasting trade, the small vessels which usually make three or four voyages to and from the port in the month having been detained in consequence of the boisterous weather. The returns of the trade of the past month are the lowest since Dec., 1861, but the aggregate returns of the state of trade for the past ten months show a large increase over the corresponding period of 1861, or any previous year. With regard to the exports, there has been a good stroke of business, the total quantity of coal and patent fuel exported being 60,847 tons—42,285 tons foreign and 18,562 tons coastwise; 800 tons of iron were also exported, the exports of both articles being considerably over those of the corresponding month of last year.

NEATH AND BRITON FERRY.—Since the opening of the Briton Ferry Docks in connection with the harbour of Neath a large increase of trade has taken place, and there is every reason to believe that this increase will still continue. We understand that the Vale of Neath Railway Company, valuing the immense facilities which the port offers for the export of coals and iron, are about erecting additional coal drops and iron ore hoists in the new docks for the quick dispatch of vessels, and which would materially add to the trade of the port. From the statistical returns just published of the trade of the port during the past month we find that the total number of vessels entering the port was 268, with an aggregate registered tonnage of 15,714, or a burthen tonnage of 24,700. Of this number 138 vessels, with a tonnage of 1879 tons were employed in the European trade, and 130 vessels, with a registered tonnage of 14,335 tons, in the coasting trade. The imports were 2328 tons, including 2329 tons of copper ore, 741 tons pig-iron, 391 tons iron ore, 708 tons timber and pit and cord wood, &c. The exports were 29,922 tons—19,083 tons coke, culm, and culm, 228 tons copper, 1171 tons bar iron, 291 tons tin-plates, and 246 tons miscellaneous goods.

LLANELLY.—The statistical returns are not published, but there has been a good business done during the past month, and both the imports and the exports are at least equal to the average.

REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

Nov. 13.—The Iron Trade in this county is rather quieter, so far as the orders received are an indication, but with few exceptions the works have enough to go on with until Christmas, and the prospects of the trade appear encouraging. The demand for coal is improving as the winter advances. In the district, east of Dudley, some of the men have demanded an advance, but it has not been conceded, and the men have not pressed for it. An advance of wages strikes one as somewhat anomalous in the present state of the labour market of the country. The Hardware Trades of South Staffordshire and Birmingham maintain the degree of improvement previously noticed. The manufacture of small arms has been checked by the falling off in the demand for America; and if it be true that Government intends prohibiting exports of war material to the Southern States it will exercise a prejudicial effect on this branch of trade, and this will be greatly increased if the same principle were applied to the Northern States. The gas-tube makers are busy, and the tin-plate workers and jappanners are pretty well employed. As a whole, the hardware trades are quiet, but still moderately active.

A serious charge against an engine-tender, named William Horton, employed at Messrs. Davies and Bloomer's works, at Pelsall, near Walsall, was heard by the Rushall magistrates on Tuesday. The defendant was charged with neglecting to regulate the supply of water to the boiler of the steam-engine under his care, thereby rendering an explosion probable. The boiler was two feet attached to it, which was balanced by weights, so as to show the height of the water in the boiler. Horton was in charge of the engine and boiler on the night of Oct. 13. On the following morning John Whittaker took his place, and on examining the boiler found that they indicated that the boiler was full of water. After firing for some time, however, and finding the engine was not making steam, he made a more careful examination, and discovered the plates of the boiler were red hot. He immediately sent for the manager, and on the boiler being examined, it was found that, instead of having 10 or 12 feet of water, it had scarcely as many inches in it, and that the floats had been entirely burnt away, so that the water overbalanced them. After hearing the evidence, the Bench sentenced the defendant to six weeks' imprisonment, and committed Whittaker for the caution he had displayed. Had he been less cautious, and let a quantity of water into the boiler, an explosion would have been the consequence. This case shows the importance of frequently trying floats, as well as looking at them, for from various causes they will often stick. Again, it shows that two kinds of indicators should be employed, as the one may correct the other.

At the Wolverhampton Police Court, on Friday last, two chartermasters—Ralph Small and his partner, were summoned under the 8th section of the Mines Inspection Act, for having permitted a boy under 15 years of age to work a gin which was used to raise and lower persons at the Hoomharr Colliery, near Bilston. The evidence of Abraham Roper, the doggy, or butty's foreman, was to the effect that the bankman went away, leaving Small, one of the defendants, and a boy who drove the horse which worked the gin at the top of the shaft, and that Small called out to him down the shaft that he was going away, and that if Roper or the man working with him wished to ascend the shaft the boy would raise them. Subsequently Roper called to the youth to raise him, got into the skip, and said that when he reached the surface the lad had left the horse, and was playing with some other children, and as the horse did not stop he was only saved from being drawn over the pulley by jumping out. He said no one was there but the lad, who was very young. The boy was called as a witness for the defence, and swore that Small was still at the spot when Roper was drawn up. He said at first, in answer to the magistrate, who appeared to doubt his competency, from extreme youth, to understand the nature of an oath, that he "was come there to tell a lie," and, though he corrected this, Mr. Partridge thought it was a slip, not of the tongue, but of the truth, and inflicted the minimum fine of 20s., with 12. 17s. costs, or in default two months' imprisonment.

In alluding, in the *Mining Journal* of Nov. 1, to the breaking of a wire-rope at Corby's Hall, it was stated that the Government Inspector examined the rope before the "break," which in type reads before the "accident." Had this been correct, it would render him somewhat accountable for the occurrence.

In a recent case of death from a fall of coal at the Bell's Mill Colliery, Hanley, it appeared that the accident occurred from insufficient timbering, though the deceased and the man working with him had put some timber at the spot, which they thought sufficient. Mr. Wynne, Government Inspector, who had examined the spot, urged that a more general system of timbering was desirable. A verdict of "Accidental death" was returned.

At the Walsall Quarter Sessions, on Monday, several more cases of alleged violation of the Truck Act were brought before the magistrates, who had previously dismissed similar cases. The complainant in an instance was an ironstone quarrying work to excavate clay, and said he had to pick out any pieces of ironstone he found in it, and it was contended that he was not such an artificer as was contemplated under the Act, and the magistrates, again affirming this principle, dismissed the case, granting permission, however, for a case on this point to be referred to the Court of Queen's Bench. In another case a puddler summoned his employer, Mr. John Jones, for paying him 15s. in goods instead of coin. The complainant had been summoned for neglect of work, and then summoned his employer for 47. 17s., which had been paid to him in goods instead of in money, and the magistrates ordered that to be paid. The 15s. in respect of which the present charge was brought was part of the 47. 17s. so repaid to him, and the magistrates held that, as the money had been repaid by their order, no information in respect to its previous improper payment could lie, and dismissed the case.

REPORT FROM DERBYSHIRE, YORKSHIRE, AND LANCASHIRE.

Nov. 13.—All the commercial evils consequent upon the unfortunate war in America appear to be growing upon us so fast and furious, that there is a general feeling that mediation will be proposed, if not by England, by France and Russia, both of which countries are suffering greatly by the depression which prevails. Were it not for this war the Iron Trade would now be exceedingly brisk. At present speculation is entirely dead letter, and what orders are given out are almost wholly for immediate requirements. Plates and bars are in great request, and the demand for armour-plates is so great that the houses engaged in manufacturing them are filled with orders which will last the whole of the present year. The demand for pig-iron has improved. There is a good enquiry for heavy ironwork generally, and for all descriptions of machinery for exportation. The Coal Trade is much briskest at the present time than last year, though the demand for manufacturing purposes has much fallen off. The herd coal of Derbyshire is getting more and more into favour in many markets, and as the coalmasters are enabled to compete with opposing counties, we may soon expect a greater increase in the demand than is now taking place. The great fault found with the railway companies at the present time is the delay which takes place in the return of the empty waggons.

A very important and influential meeting of coalowners was held at Driffield, on Wednesday, to consider the most advisable steps to be adopted with the view of promoting the making of a branch railway from Chesterfield to Sheffield via Driffield. Some time ago, when the Midland Railway was first projected, it was intended to have made a direct line from Sheffield to Chesterfield; but the opposition of the principal inhabitants of Sheffield was such that the route was abandoned. It was then believed if such a line were made that Sheffield would be inundated with coals, and that the local coalmasters, who had invested their capital in mines in the neighbourhood, would be ruined. Whereas, so totally different has the result proved, that there are now upwards of 90,000 tons of coal carried into Sheffield annually. It has been found now that the price of coal could be materially cheapened in Sheffield in regard to the cost of transit, Driffield having valuable minerals to send, the distance from the two towns being only six miles. The minerals could be conveyed by railway for about one-tenth of the cost now incurred by carting, and thus, it was calculated, would effect a saving of 20,000s. a year on coals and coke alone. There were coals in the district 7 feet thick. The Midland Company had been urged to take the line in hand, but they had not done so, and now the Great Northern were likely to undertake it in a new route, which was being surveyed for a line from Nottingham to Sheffield. The meeting was

unanimously in favour of the line, and it was agreed, if the Midland or the Great Northern did not take the matter in hand, that application should be made to the Government for a bill, and the line should be formed by an independent and separate company. The local share markets have been actuated by the general depression which prevails, and except in bank, gas, and water stock there has been no business done worth reporting. Mines are exceedingly dull.

The directors of the Mill Dam Company have at length complied with the demand made for a statement of their accounts since the last meeting held in June, 1861. The shareholders were apprehensive that their affairs were not in a satisfactory state, but they had no suspicion that the company was involved in debt to the large amount now shown, particularly as the time was from time to time represented to be flourishing, and the shareholders, also, some time since received a circular from the secretary, announcing that "great improvements had taken place" in it. It appears that from the last meeting in 1861 up to Sept. 30, 1862, the company had received from the sale of the mine, the whole of which, together with the liabilities of the company now amount to 1879. The accounts show that the working expenses of the mine (including dues or rent, which, however, do not amount to produce, leaving a balance of more than 1000. against the mine. The liabilities are made up of various sums owing to tradesmen, balance due to treasurer, and law charges; but nothing has been laid out for new machinery. At the meeting to be held this week it is expected some plan will be devised to provide for payment of the large debt, without resorting to another call, for on the last occasion some of the shareholders expressed their determination to resist payment of any further calls, under the provisions of the Joint Stock Registration Act, the directors having, for some cause, omitted to have the company registered according to the prospectus issued when it was first got up. This is the tenth year of the lease (granted for 20 years) of Mill Dam Mine, without a dividend ever having been declared; but, on the contrary, many thousands of pounds have been spent in it, and the mine is now involved in more debt than at any period since the company was formed.

"LIVES OF THE ENGINEERS."

As the third volume of his very excellent and interesting work, the "Lives of the Engineers," Mr. Smiles has just re-issued a revised edition of his "Life of George Stephenson," with the Life of his son, Robert, late President of the Institute of Civil Engineers, incorporated. In the former volumes the history is brought down to the establishment of the Railway System, so that the reader will have been well prepared for the study of the present work, the materials for which have been obtained from the most reliable sources (a vast amount of additional information having been collected and availed of since the issue of the first edition), and treated in an admirable manner. Mr. Smiles has enjoyed the active co-operation of all who were able to throw a light upon the subject, including Robert Stephenson himself, and has availed himself of their assistance to the utmost. Mr. Smiles commences his narrative with a sketch of the history of Newcastle and the Great Northern Coal Field, and is thus enabled conveniently to introduce his readers to the very earliest infancy of the railway road system. At an early period the coal was carried to the boats in panniers, or in sacks, upon horses' backs. Then carts were used, to facilitate the progress of which tramways of flagstone were laid down, and the vehicle was enlarged, and mounted on four wheels instead of two. Still further to facilitate the haulage of the waggons, pieces of plank were laid parallel upon wooden sleepers, embedded in the ordinary track, by which friction was still further diminished. It is said that these wooden rails were first employed by one Mr. Beaumont, about the year 1630, and on a road thus laid a single horse was capable of drawing a large loaded wagon from the coal pit to the shipping staith. In these rude wooden tracks we find the germ of the modern railroad. In 1776, a cast-iron tramway, nailed to wooden sleepers, was laid down at the Duke of Norfolk's colliery, near Sheffield. The person who designed and constructed this coal line was Mr. John Curr, whose son has claimed for him the invention of the cast-iron railway. The plates of these early tramways had a ledge cast on their edge to guide the wheel along the road. In 1780, Mr. Wm. Jessop constructed a railway at Loughborough, in Leicestershire, and there introduced the cast-iron edge rail, with flanges on the tyre of the wagon-wheels, instead of on the rail itself; and subsequently the railroad was modified to the form in which we now have it. The railroad being, as Robert Stephenson said of the locomotive, "the invention of one man, but of a nation of mechanical engineers."

The succeeding chapter is devoted to the consideration of George Stephenson's early years, in which we are led from his birth to the time when he had improved his position to such an extent as to enjoy an income of 8d. per day, his labours in the first instance having been liberally rewarded with 2d. per day. We are then introduced to his earlier career as an engine-man, when he considered himself "a made man for life," on 12s. per week. But although he had managed to make himself so well able to perform the duties of an engine-man, he had not yet even begun his literary culture. He was 18 years old before he learnt to read, and at 19 proud of having learnt to write his own name. His first schoolmaster was Robin Cowens, who taught him some little reading and writing for 8d. per week, but he afterwards obtained a more competent tutor, who instructed him in arithmetic for 4d. per week. It was when appointed brakesman at the Dolly Pit, Black Callerton, that Stephenson formed his attachment to Fanny Henderson, who was servant in the farmhouse in which he lodged, and we are then told of his appointment as engine-man at Willington Quay, and of his union with Fanny in 1802. It was while living at Willington Quay that his only son Robert was born, on Oct. 16, 1803. After working about three years as brakesman at the Willington machine he took a similar situation at West Moor Colliery, Killingworth. Scarcely a year after he lost his wife, and long lamented the bereavement. Shortly after he was offered the superintendence of one of Boulton and Watt's engines at a large spinning-works near Montrose, and it was here that he contrived his wooden boot for preventing the sand entering the snore-holes of a pump. Upon his return to Killingworth, a year later, he had contrived a save 28s., which, however, was all swallowed up in paying his family debts, and finding a militia substitute for himself. But he was soon able to retrieve his position by continued exertion, and in 1810 had the opportunity of testing his skill as an engine-wright at Killingworth Pit, achieving such a success that Ralph Dodds made him a present of 100s.—"The biggest sum of money he had up to that time earned in a lump," and in 1812 "Old Cree," the engine-wright, having been killed by an accident, Stephenson was appointed engine-wright of the colliery at a salary of 1000. per year. The next chapter is devoted to the history of the Stephensons at Killingworth, and the education and self-education of father and son, in which we observe that Mr. Smiles directs attention to the interesting letter (first printed in the *Mining Journal* of April 1, 1862) written by Robert Stephenson, whilst still a youth at college, and 19 years of age, embodying his views upon many details connected with railways. The letter bears date Sept. 26, 1821, and was addressed to Richard Seorton, Esq., and the other gentlemen connected with the construction of a railway in the neighbourhood of Durham. The conclusions which Robert Stephenson arrived at are:—"First, that metal iron is preferable to cast-iron in the construction of a railway, because it is much less liable to breakage, has fewer joints, and is more economical than cast-iron.—2. That the maximum load of a wagon and its gear should not exceed 2 tons, unless under imperious circumstances come with the local trade of the country.—3. That unless the greatest care and attention be paid to laying the railway, making up the ground in chairs or pedestals of a proper construction, and of sufficient breadth, according to the nature of the ground, and in observing a correct arrangement for cross and lateral drains, the best line of draught, and all the maxims of the engineer, will be found to come far short of the proper effects."

In recording the earlier history of the locomotive Mr. Smiles alludes to Mackworth's sailing waggons; Richard Lovell Edgeworth's sailing cart with the portable railroad, since revived in Boydell's patent; the first motive steam-carriage, invented by Cugnot, and built at Paris in 1769. Wm. Murdoch's model, as well as that of Richard Trevithick—concerning which so much has been written in the *Mining Journal*. The invention of the double cylinder was due to Matthew Murray, of Leeds, and in Blenkinsop's engines began running on the railway from Middleton Colliery to the town of Leeds, a distance of about 3½ miles. In 1812 Mr. Chapman, of Newcastle, invented an arrangement precisely similar to that for which the International Jurors of 1862 (just 50 years after) awarded a prize medal to an Italian—Signor Agudio—for a "good mechanical arrangement for working very steep inclines," though in 1812 it was soon abandoned, because "there was so great a loss of power by friction." The Wylam engine is then referred to, and also Stephenson's first locomotive which was built with Lord Ravensworth's money, at Killingworth Colliery. The question of Stephenson's claim to the merit of having first discovered the safety-lamp is next entered into. We maintain that both Davy and Stephenson were engaged in perfecting the lamp at the same time, and that it is considered that a combination of the principles of both produced the best results. The difference between Davy's original lamp and the one constructed after Stephenson's ideas is this—Stephenson sought to combine the flame with the smallest quantity of air that would support combustion.

"Lives of the Engineers, with an Account of their Principal Works." By SMILES. Vol. III. (George and Robert Stephenson.) London: John Murray.

in order that when the air became foul the light should go out; whilst Davy sought not to lessen the supply of air, but to admit it to the flame through a medium which should not allow the passage of flame: the inventions are, therefore, distinct from each other. Yet, Davy has this advantage—that his original lamp was so far perfected that it continues to be used to the present day in its original form; whilst Stephenson's has never been used except as an interior shell to an ordinary Davy lamp since the experimental trials with it were made. We think that the presentation of the lamp to Sir Humphry Davy, as the inventor of the safety-lamp, and of the lamp to George Stephenson, in consideration of what he had done in the same direction, fairly represented the relative merits of the two inventors. As to Mr. Nicholas Wood's remark that "Stephenson's is the superior lamp, Davy's is safe—Stephenson's is safer," it is manifestly unjust, because the lamp which he compares with Davy's is not Stephenson's, but a Stephenson's enclosed in a Davy. We must not forget, however, that, from Mr. Wood's intimate connection with Stephenson whilst the original lamp was being experimented with, every evidence which can be given in favour of Stephenson's priority redounds to his own praise.

After a sketch of the further improvement of the locomotive, and the further propositions to introduce it on common roads, which at an early stage was rejected by Stephenson (who considered it impracticable to apply steam-power economically to common road travelling), we are told that in 1818 the first systematic attempt was made to determine the precise amount of resistance to carriages moving along railways. It was then for the first time ascertained by experiment that the friction was a constant quantity at all velocities. We have then the history of the Stockton and Darlington Railway. It was in preparing the Amended Stockton and Darlington Act of 1823 that at Stephenson's urgent request Mr. Pease had a clause inserted taking power to work the railway by means of locomotive-engines, and to employ them for the haulage of passengers as well as merchandise, and Stephenson was appointed the company's engineer, at a salary of 300*l.* per year. We are next introduced to the employment of the half-lap joint in the rails, and the malleable wheel to the locomotive, and the substitution of wrought-iron for cast-iron rails.

In 1830 Mr. Gray published his "Observations on a General Iron Railway," and from this time he continued so to "bore" the Lord Mayor, Ministers, and all of influence to aid him in carrying out his scheme, that all who knew him considered him to be "cracked." In 1821 the first Stockton and Darlington Act was passed, and shortly after William James, of West Bromwich, became connected with passenger railways by being appointed to survey for the Liverpool and Manchester Railway. The history of the survey of this line is very amusing, from the many difficulties and impediments met with from the prejudice of the inhabitants of the district through which the proposed line was to pass, and the account of Stephenson's examination before the Committee of the House of Commons is well worth reading. The history of the several engines constructed during the earlier period of railroads is then given, and the life of Robert Stephenson, which is treated in the same narrative as that of his father, until we are brought in connection with railway engineering, down to the death of Robert Stephenson, and there is also an interesting appendix, giving "Robert Stephenson's Narrative of his Father's Inventions," &c. The entire work is rich in anecdotes—the authenticity of which it is not for us to critically examine; they well illustrate the utilitarian character of the great engineering genius, and help to make a very readable work, without at all interfering with the strictly biographical matter.

GEOLOGICAL SOCIETY OF LONDON.—Nov. 5: Professor A. C. Ramsay, President, in the chair. The following communications were read:—

1.—"Description of some Fossils from India, discovered by Dr. Fleming, of Edinburgh," by Dr. L. de Koninck, For. Mem. G.S.

2.—"On a Deposit containing Diatomacea, Leaves, &c., in the Iron Ore Mines near Gironde," by Miss E. Hodgson: communicated by the President. The object of this paper was to show that this deposit, which was first described by Mr. Bolton, and considered by him to be of lacustrine origin, was deposited in a large cavern or chain of caverns by a subterranean stream, originating probably in a brook, called the "Poaka Beck." The author first described, in detail, some of the various caverns and swales which abound in the limestone of the district, and then alluded to the curious belief of their communication with each other and with springs. Miss Hodgson remarked that, prior to the year 1842, the "Poaka Beck," after having become partially encumbered at Iman Gill, is said to have taken a subterranean course. Since the above-mentioned date its course has been diverted. Mr. Bolton's sections were then critically examined; and the paper concluded with a list of the Diatomacea found in the deposit, with notes on the places where they occur in the streams of the district, and with some remarks on the vegetable remains.

3.—"On the Geology of a part of the Massulipatam District," by Capt. F. Applegate, R.A.M.: communicated by the President.

4.—"On the Association of Granite with the Tertiary Strata near Kingston," by J. G. L. Smith, Esq., F.G.S.: in a letter to Sir E. J. Murchison, F.G.S., &c. The occasion of this letter was the discovery, by the author, of a granitic formation traversing Jamaica in a direction from S.E. to N.W., being the same as that of the earthquake shocks. It places the carbonaceous series, and also the tertiary strata, whence the author concludes that it is of tertiary age. It usually contains copper ores, and is more or less decomposed. On Nov. 9 the following papers will be read:—1. "On the Cambrian and Huronian Formations, with some remarks on the Laurentian," by J. J. Bigsby, M.D., F.R.S., &c. 2. "On some Eozoician Vertebræ from the Coal Measures of Nova Scotia," by Dr. C. Marsh, Esq., of Yale College: communicated by Sir C. Lyell, V.P.G.S.

INSTITUTION OF MECHANICAL ENGINEERS.—The general meeting of members was held on Nov. 6, at the house of the Institution, Newhall-street, Birmingham, Mr. Charles F. Beyer in the chair.

The Secretary (Mr. W. F. Marshall) having read the minutes of the previous meeting, a number of new members were elected; and the officers of the Institution were re-elected for the next annual election.

The first paper read was "On a Packing for Pistons of Steam-Engines and Pumps," by Mr. GEORGE M. MILLER, of Dublin; which consists of two packing rings fitted into grooves in the piston, and pressed outwards against the cylinder by the pressure of the steam in steam-engine pistons, without the use of any springs. The steam is admitted behind the packing rings by two small holes opening from each face of the piston into the bottom of the nearest groove, whereby each ring in turn is pressed steam-tight against the cylinder by the action acting alternately on the opposite sides of the piston. Only one ring is thus in action at the same time, and when the steam is shut off the piston is free to move without any friction. The packing rings are of steel or brass, put into the grooves in the piston without any spring, the ends of the rings being made generally a simple butt joint at the division, and sometimes with a lapped or a tongue joint. These steam-packed pistons have been used for several years in the locomotives of the Great Southern and Western Railway of Ireland, and have proved thoroughly satisfactory and advantageous, the engines having run between 30,000 and 40,000 miles on an average with the brass or steel packing rings, before the rings required renewal, which one set of steel rings run upwards of 90,000 miles before the rings were worn out. The same packing rings have been employed for some years with equal advantage in stationary engines with vertical cylinders. They have also been used for some years in pump-buckets, the rings in this case being pressed outwards against the cylinder by the pressure of the water admitted behind them, in the same manner as in the steam-engine; and the same plan of packing has also been applied to the gland packing of a pump-plunger, the packing rings being in that case pressed inwards upon the plunger by the pressure of water round the outside of the rings. Specimens were exhibited of the steel and brass packing rings taken from the pistons of locomotive and stationary engines; and also of a pump-bucket with brass packing ring, that had been working continuously for more than two years.

The next paper was "On Machinery for the Manufacture of Gun Stocks," by Mr. THOMAS GREENWOOD, of Leeds; giving a description of the entire series of operations that are performed by a set of machines for shaping and finishing the stocks for rifles. The first paper was a "Description of a Hydraulic Shears and Punch," by Mr. JAMES WOOD, of Birmingham; consisting of a simple arrangement of hydraulic press in a frame, the shears, and portable frame, applied to the purposes of shearing and punching iron bars. In the shears the upper shear blade is fixed in the frame of the machine, and the lower shear blade is carried on a ram, the ram being pumped in by a small force-pump, worked by a hand lever, the water being pumped in by the press cylinder in lowering the shears. For enabling the water to escape from the press cylinder in lowering the shears, a shearing piece of work, the hand lever is depressed beyond the ordinary working position, until a projection on the bottom of the plunger presses open the delivery valve, allowing the water to flow back from the press into the cistern. In the punch, the press cylinder is placed at the top and inverted, the ram carrying the punch. This hydraulic press and punch afford the means of shearing and punching railway rails or bars of various sizes, and the power of one man only at the hand lever; in shearing rails the shear makes a clean cut. The same construction of force-pump and press is also applied to a portable hydraulic lifting-jack, the ram of the press forming the foot on which the load is placed, while the cylinder is inverted and raised; the reservoir of water is contained in the head of the jack, from which the water is pumped by the force-pump into the press cylinder for raising the load, whereby a load of as much as 60 tons can be lifted by the power of one man with a portable jack. Specimens of the hydraulic lifting-jack were exhibited, and also specimens of rails and bars sheared and punched.

THE COTTON FAMINE, AND THE ZOSTERA MARINA.—We some weeks since directed the attention of our readers to the proposition of Mr. Harben to employ the Zostera marina, or sea purslane, as a substitute for cotton; and we have since then seen in one in which general interest is taken, it will be gratifying to learn that Mr. Harben, the indefatigable director of the Polytechnic Institution, is now determined to gain a very excellent insight into the subject. The relative merits of zosteræ, flax, jute, and other proposed substitutes for the cotton plant, are discussed in the difference between Sea Island, Indian, and other cotton explained; the comparative value of the cotton trade considered, and the modes of transit to England illustrated. A series of new dissolving views designed and painted by Mr. Benwell, showing the various stages of the cotton plant, and the manner in which it is cultivated, are also shown. Mr. Harben was much applauded at the close of the lecture (on which the charge would be half-a-crown) would be devoted to the resolution of the distressed workmen in Lancashire. Mr. J. L. King delivers a very able lecture on the means of Repelling Boarders, in which a large amount of information is given, and the evening's entertainment is rendered particularly amusing by the singing of the London Vocal Quintet Union, and the "Seven Ages of a Great City," by Mr. Cooper.

THE LEAD DEPOSITS OF THE MENDIP HILLS.

If any proof were wanting of the vast importance to the miner of sound scientific knowledge, it could be readily obtained by the study of the vast deposit of lead ore and slags which have been left as valueless by the ancient lead miners of the Mendip Hills, although such eminent authorities as Prof. Ansted, Mr. Evan Hopkins, and Mr. Nicholas Ennor declare it to contain something like 500,000*l.* worth of metallic lead. Referring to the deposit, Mr. Evan Hopkins remarks that the "slimes appear to have been derived from the washings of the white carbonate of lead, and not from the sulphuret. Scarcely any of the blue lead ore can be detected either in the deposits or in the mining waste. I conclude from this that the predominating class of ore in the Mendip limestone was the white carbonate of lead. Indeed, the white carbonate was not recognised as lead ore by our modern miners until comparatively a few years ago. Probably the ancient miners were equally ignorant of the value of white lead ore slime, and have thus left these valuable deposits for the benefit of the present generation." Mr. Nicholas Ennor also regards the lead slimes as carbonate, although its existence in that form is attributed to other circumstances than those premised by Mr. Hopkins. "Thousands of tons of this slime," says Mr. Ennor, "now lie deposited in the low grounds, worth in the present state 7*l.* per cent. for lead, and when passed three times through a round buddle are worth 43 per cent.; and what is very singular, that which was once sulphuret has, from atmospheric changes, become carbonate of lead, and is the colour of slime tin, and this probably caused Dr. Somers to treat it as worthless. There are now in work six round buddles, at a cost of about 5*s.* in 1*l.*, and when in full work perform the necessary operation of separation at even a less cost; and yet Dr. Somers, by smelting these slags in the crude and only method that was then known, realised an immense fortune: others already demonstrating that by the adoption of the modern system of smelting and dressing the most sanguine results must follow." Which of the two opinions may be the correct one, of course, matters little, inasmuch as both agree that there is a good deposit of carbonate of lead, which it will be profitable to work.

The principal portion of the deposits above alluded to is contained within a property known as the Priddy Minery, and a limited liability company—the St. Cuthbert Lead Smelting Company—with a capital of 75,000*l.*, in shares of 5*l.* each, is now in course of formation for rendering the lead contained, and which is estimated to be worth 900,000*l.*, marketable. Professor Ansted, who has carefully surveyed the property, explains that the deposits left by the old smelters have "undergone a process of filtration, going on for centuries, by which the lighter mud has been carried away. What remains, having already been partly washed, is far richer in ore than is usual in similar cases elsewhere, and is more valuable than it originally was, and I believe the estimates that the whole mass will yield on an average upwards of 10 per cent. of lead ore for the furnace (the ore being dressed to contain 40 per cent. of metallic lead), is not at all too favourable a view of the case. It is, at any rate, certain that a cutting, by which about 1000 cubic yards of stuff have been moved, has produced a pile of dressed ore, calculated to contain 50 tons of metallic lead, showing a gross value of (say) 20*s.* per cubic yard. This pile of ore (say 120 tons) is quite ready for the smelter." He mentions, moreover, that "it should be observed that operations formerly carried on in this minery with respect to the old slags and furnace-hearths have been very profitable; but what is now proposed is to treat the fine mud itself, which has hitherto been neglected, although known to contain a sufficient percentage of carbonate and sulphuret of lead (chiefly the former), in a state of minute division, to secure a large profit." The property is held on lease for fourteen years, renewable forever under the Ecclesiastical Commissioners, at a royalty of 1-18th; and as the right of water supply has been secured by the successful termination of a heavy Chancery suit, the sole impediment in the way of developing the property to advantage has been removed.

The company will secure the transfer of the whole of the machinery and the leases for 65,000*l.*, and the remaining 10,000*l.* will, it is considered, be ample for working capital. Even so cautious and reliable an authority as Mr. John Arthur Phillips estimates that the mass (which Mr. Evan Hopkins estimates will take 30 years to exhaust) will yield a net profit of 350,000*l.*, so that a profit of 15 to 20 per cent. per annum may safely be calculated upon. Mr. Phillips reports that the whole mass extends over an area of about 25 acres, and that he was informed by Mr. Hornblower, the resident manager, that the whole mass will average 7*l.* per cent. of that metal. If, then, we assume the estimate of Messrs. Hopkins and Ennor to be correct—that the deposit contains 400,000 cubic yards, each yard weighing 1*l.* tons, and that the whole will afford 7*l.* per cent. of lead, the total weight of that metal present will be represented by about 45,000 tons, worth, at 20*l.* per ton, 900,000*l.* If from the total weight of metal we now deduct one-third for loss in washing and smelting, we have remaining 30,000 tons of lead, having a money value of (say) 600,000*l.* To wash these ores and prepare the lead for market would probably cost from 8*l.* to 10*l.* per ton; but if we assume the latter amounts as correct, there would remain a net profit of 350,000*l.*, as the result of treating the whole of the lead-bearing debris existing on the property. The machinery and appliances at present on the establishment consist of a steam-engine and sundry dressing apparatus, together with two calcining furnaces, a Castilian smelting furnace, and an improving furnace.

The whole of the foregoing apparatus has been judiciously erected, and is well calculated to perform the work for which it is intended; but before works on a large scale can be carried out efficient sizing and jigging apparatus must be added. The round buddles recently erected are, he considers, better adapted for their work than any he has yet seen." The promoters explain that "in this undertaking there is none of the uncertainty necessarily attending all mining operations," and consider that the undertaking is, consequently, peculiarly entitled to the confidence of the public.

THE NORTH POOL MINING DISTRICT.

We have more than usual satisfaction in drawing attention to the NORTH POOL MINE, a section and plan of which appears in another part of this day's Journal—in fact, the plan embraces all, or most, of the mines situated to the north and south, and surrounding the Carn Brea Hill, skirting from the town of Camborne to Redruth, and embracing the four parishes of Camborne, Illogan, Redruth, and Gwennap—the richest mineral district for yields of copper and tin ores of any in the known world. The North Pool Mine was abandoned a few years ago under peculiar and exceptional circumstances, and at the time shares sold for 300*l.* per 32*d.*, the number now constituting the enterprise in question. The property has passed into the hands of Mr. RICHARD TREDINICK, of Lombard-street, who is issuing the shares at 125*l.* each, whilst his association with it is a guarantee that the works will be carried out with practical spirit and economy. The company's grant is about a mile in length, and embraces five lodes, only one of which is partially wrought, still profits of 61,450*l.* accrued to the late company upon a capital of 4500*l.* We subjoin a few statistics as regards the mines surrounding, which cannot but prove satisfactory to the uninitiated of our readers:—

Several of our best mines of the present day were in the Dividend List at the close of the year 1848—a period of 14 years. It cannot, therefore, be said that British mines are evanescent, or more visionary than other undertakings open to the public choice for investment of its spare capital, and associated with the speculative and progressive enterprise of the country. We do not mean to contend for one moment that there are no risks incurred with Cornwall and Devon mining; but this we do avow, that all the mines that declared dividends in the year 1848 are still paying dividends, or stand acknowledged progressive undertakings, excepting the cases of East Rose, North Pool, Trevelick and Barrier, Trevelick, and Trevelick; of which a few remarks hereafter. The Devon Great Consols yielded dividends in the year 1848 of 30*l.* per share, when the price was 230*l.*; the dividends now are 9*l.* two-monthly, and the price 500*l.* per share. Carn Brea sold in the market at 90*l.* per share, and paid 14*l.* dividends in 1848. The present value is 65*l.* per share, and with fair prices for tin the works would be equally profitable again; over the whole period it has been one of our most extensive and profitable enterprises. Par Consols declared dividends of 12,800*l.* in the year 1848, and has continued since a great and prosperous mine. The aggregate profits have been 361,12*s.* 6*d.* per share upon 11, 2*s.* 6*d.* expenditure. Seton gave 21*l.* 6*s.* dividends in 1848, and has made a market value of 167*l.* 10*s.* per share. This property, though subject to great changes and fluctuations in the interval, is now regarded as one of the most encouraging adventures, and the price this day is 167*l.* 10*s.* per share. South Frances shares stood at 60*l.* each in 1848, and the dividends for that year were 11*l.* 10*s.* per share. Over the whole period this has proved one of our best mines, and but for the unhappy dispute with West Basset, and the consequent litigation thereon, would now be making very far greater profits than it is; still up to this date dividends in the aggregate have been 362*l.* 6*s.* upon 18*l.* 18*s.* 9*d.* outlay per share; the closing price this day is 105*l.* North Rose sold in 1848 at 40*l.* per share, against 50*l.* 45*s.* this day; and the future we are advised is fraught with lively promise. In the year 1848 the dividends were 27, 12*s.* per share, and in the aggregate 104,000*l.* profits accrued upon 1400*l.* outlay. Basset in 1848 sold for 35*l.* per 512*l.* share, and the profits for that year were 1280*l.*, or 2*l.* 10*s.* per share. This has proved one of our most profitable mines, and still ranks high in public estimation; the dividends are now 2*l.* 10*s.* monthly, and the price is 85*l.* per share. The total profits made and divided amongst the shareholders amount to 301,824*l.*, upon 2624*l.* expenditure. Stray Park gave a dividend of 500*l.* in the year 1848, and sold at 12*l.* per share; the price since has ranged to 65*l.*, and this day it stands at 40*l.* per share. The United Mines declared dividends amounting to 1000*l.* in the year 1848, and sold for 35,000*l.*; this mine is now amalgamated with Clifford. The aggregate profits accruing amounted to 422,000*l.* South Caradon was selling at 20 per cent. of pro-

sent market price in 1848, and the dividends are increased fourfold. West Caradon shares were 32*l.* 10*s.* in 1848, against 34*l.* this day, the price in the interim having ranged so high as 100*l.* to 105*l.* per share. Dividends have greatly fluctuated, and from time to time large dealings in shares have transpired of a speculative character; whilst, regarded as an investment, it has ever, until of late, been a favourite with the public. In 1848 Providence was a good dividend tin mine, and so it is now. Margaret was also a good dividend tin mine in 1848, and is so still. The market value, from 30*l.* per share, ranged to 65*l.*, and closes, this day, 44*l.* to 46*l.* Treleigh Consols, Spearne Moore, and West Providence declared dividends in 1848, and all who then held or embarked therein have had opportunities of realising, at greatly advanced prices, whilst dividends, in regard to the two latter, have proved substantial. The former is still at work, and exhibits strong evidence of soon resuming profits. The foregoing are all the dividend mines in Cornwall and Devon in the year 1848, that still rank as dividend mines in our share list this day. Great would have been the gains to anyone who had followed our advice in that year, and invested their money, either at hap-hazard, or in the purchase of a single share in each of the mines referred to. The mines which do not now pay dividends, that declared them in 1848, and which have since ceased to work, are the subjoined. All however must admit that taken together they were prizes of no ordinary character and importance—namely, East Rose declared dividends of 286,360*l.* upon 6400*l.* outlay; North Pool, 61,450*l.* upon 4500*l.* outlay; Trevelick, 48,441*l.* against 1860*l.*; Trevelick and Barrier, 37,200*l.* against 15,600*l.*; and, lastly, Trevelick, 46,656*l.* upon an expenditure of 1536*l.*

MINING EXCHANGE IN CORNWALL.—Mr. C. Carkeek has taken the premises lately occupied by the Miners' Bank, at Camborne, to establish a Mining Exchange, where mining men can assemble and transact their business. We understand the Exchange is well supported, and its opening will be inaugurated by a grand dinner in the forthcoming week.

SALE OF MINE SHARES.—On Wednesday Mr. Tippet sold by auction, in the Registrar's Office, in the Stannaries Court, a number of shares in Cliffrath and Wentworth Mines, which brought 6*l.* 1*s.* per share. Several shares in Carn Vivian and Wheal Fursden Mines, the latter in Devon, were also offered, but there were no bidders.

TREATING SULPHIDE OF ANTIMONY.—Mr. William Glass, of Princes-street, Lambeth, proposes to take black sulphide of antimony, or crude antimony, and heat it with or without sulphur, in a closed retort; atmospheric air is now blown in, and the products are collected in chambers; the antimony is condensed as white oxide, and the sulphurous acid may be employed as such, or converted into sulphuric acid by treating with oxygen or steam as usual.

A STEEL PADDLE STEAMER.—Messrs. Jones and Quiggin, of Liverpool, will shortly launch a steamer of 250 tons burden, built of steel plates, only 3-16ths of an inch in thickness. The Liverpool Journal of Commerce states that she is intended for a "peculiar trade," and that she will steam 20 knots an hour. The peculiar trade is understood to mean the running of the blockade.

THE LADY'S ILLUSTRATED ALMANAC.—The edition of the very elegant annual bearing this title for 1863 has just appeared, and contains a vast amount of information of considerable interest to the fair sex, for whose use the almanac is especially intended. In addition to the usual almanac matter the book contains profusely illustrated articles on cotton spinning; straw bonnet making; hop picking; our public schools; and a short novel entitled Matrimonial Perils; instructions on fancy work of various kinds. The "Lady's Illustrated Almanac" is a very useful work, which no Englishwoman should be without.

India Office.

BY ORDER OF THE SECRETARY OF STATE FOR INDIA
IN COUNCIL, notice is hereby given that the DIRECTOR-GENERAL OF STORES FOR INDIA will be READY, on or before MONDAY, the 17th instant, to RECEIVE PROPOSALS in writing, sealed up, from such persons as may be willing to SUPPLY—

CAKE COPPER.
And that the conditions of the said contract may be had on application at the India Store Office, Cannon-row, Westminster, where the proposals are to be left any time before Two o'clock P.M. of the said 17th day of November, 1862, after which hour no tender will be received.
India Office, November 6, 1862.

India Office.

BY ORDER OF THE SECRETARY OF STATE FOR INDIA
IN COUNCIL, notice is hereby given that the DIRECTOR-GENERAL OF STORES FOR INDIA will be READY, on or before MONDAY, the 17th instant, to RECEIVE PROPOSALS in writing, sealed up, from such persons as may be willing to SUPPLY—

FIG. IRON; also STEEL.

And that the conditions of the said contract may be had on application at the India Store Office, Cannon-row, Westminster, where the proposals are to be left any time before Two o'clock P.M. of the said 17th day of November, 1862, after which hour no tender will be received.
India Office, November 5, 1862.

Sheffield School of Practical Science and Metallurgy.

SHEFFIELD SCHOOL OF PRACTICAL SCIENCE AND METALLURGY.

PRESIDENT.
His Grace the DUKE OF DEVONSHIRE, K.G., F.R.S., D.C.L., Chancellor of the University of Cambridge.

VICE-PRESIDENTS.
THE MAYOR OF SHEFFIELD, JOHN BROWN, Esq.

THE MASTER CUTLER.
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ROBERT HUNT, Esq., F.R.S., F.S.S., Keeper of Mining Records.

WARINGTON W. SMYTH, Esq., M.A., F.R.S., Professor of Mining and Mineralogy in the Royal School of Mines.

DIRECTOR.
The Rev. G. B. ATKINSON, M.A., Principal of the Collegiate School; late Fellow and Assistant Tutor of Trinity Hall, Cambridge.

PROFESSORS.

CHEMISTRY, METALLURGY, AND GEOLOGY—JAMES ALLEN, Ph.D., F.C.S. of the Universities of Gießen and Berlin.

ENGINEERING AND MINING—J. THOMPSON, C.E.

MATHEMATICS, NATURAL PHILOSOPHY, AND APPLIED MECHANICS—Rev. G. B. ATKINSON, M.A.

The Sheffield School of Practical Science and Metallurgy will afford a complete scientific and practical education to students who are destined to become civil, mechanical, or mining engineers, or manufacturers of any kind. Its object is thoroughly to discipline the students in the principles of those sciences upon which the operations of the engineer, metallurgist, or manufacturer depend.

The education will be given by means of systematic courses of lectures, by catechetical class instruction, by practical teaching in the laboratory and drawing room, and occasionally by field excursions.

The School of Practical Science and Metallurgy will be conducted in the buildings of the Sheffield Collegiate School. The two Institutions, although both under the superintendence of the Rev. G. B. Atkinson, Principal of the Collegiate School, are, however, entirely distinct.

A detailed prospectus, containing syllabuses of all the courses of lectures, and all other information, arrangements for boarding, &c., may be obtained by application to the director.

THE SCHOOL WILL OPEN IN THE FIRST WEEK IN FEBRUARY, 1863.

SECRETARYSHIP WANTED.—A GENTLEMAN of business

tact and experience, having offices in London, is OPEN to ACCEPT the SECRETARYSHIP of a MINING ASSOCIATION, COLLIERY, IRON, SLATE, or OTHER COMPANY, that would not require his whole time and attention exclusively.—Address, in the first instance, to "T. R. H.," Post-office, Opera Commaide, Pall-mall, S.W.

ADVANTAGEOUS INVESTMENT.—A French GENTLEMAN

is in WANT of TWO THOUSAND POUNDS, for the EXPLOITATION of an IMMENSE COAL and LIME PIT. He offers as guarantee a mortgage and high interest. Repayment in three years.—Address, "Franco," Mr. C. H. Tiffen's, Director of the Agence Immobilière, Nice, France.

RESIDENT COLLIERY MANAGER.—WANTED, an

UNDERGROUND MANAGER for a COLLIERY in SOUTH WALES. He will be required to devote his whole time to the superintendence of the work, dialling and mapping. He will also be required to make all the working plans and direct the work.—Applications, stating amount of salary required, and enclosing testimonials, to be forwarded to "W. R.," 8, Duke-street, London-bridge, London.

TO BE LET, on the most reasonable terms, good 6-ton NARROW

GAUGE RAILWAY TRUCKS, either for long or short terms.—Apply to Mr. J. HICKMAN, Brampton Ash, Market Harborough.

FOR SALE, a 20 in. cylinder WHIM ENGINE, complete, with

8 tons BOILER, nearly new.—Apply to W. HOSKIN RICHARDS, broker, &c., 4, Chapel-street, Penzance.—November 7, 1862.

FOR SALE, a splendid nearly NEW 30 in. cylinder STEAM

PUMPING ENGINE, with 10 ton BOILER, very bright, and in perfect order.—Apply to Mr. JAMES HOLLOW, Lelant, Hayle.

FOR SALE, a 100 in. CYLINDER, with steam case, metallic

platen, and bottom complete, in good condition, and calculated for 9 ft. stroke. Can be easily shipped, and had on reasonable terms, by applying to JAMES JULEFF, jun., Chiverton Mines, Redruth, Cornwall.

THE OTEA COPPER MINING COMPANY (LIMITED).—

The Otea Copper Mine is most advantageously situated in New Zealand. There

has already been sold from it £200,000 worth of ore, and Capt. Josiah Holman (a practical agent of high repute, and now the manager of the Scottish Australian Mines, in Australia), from a recent inspection, estimates that there are still 4000 tons of full 15 per cent. produce above the adit alone, which would be worth nearly £50,000, and though the shaft is sunk only 20 fms. under adit, he says there is also a good deal of ore available there. But he further remarks that if only a permanent increase in the value of the lode takes place in depth, such as seen in the 12 fm. level under adit, the future value of the mine would be very great. From the ore ground now opened he could at once make a good profit, with the aid of adequate machinery, which he recommends to be sent out.

The mine is close to the coast, with facilities for shipping the ore, so there is no land carriage, a most important fact; while the freight to England varies from only 2*s.* 6*d.* to 12*s.* 6*d.* per ton. The company acquires the freehold of this valuable property (including 300 acres of land, plant, &c.) on very and unusually moderate terms. There are 25,000 shares of £2 each, 5*s.* to be paid with application and 5*s.* on allotment, and no further call for at least 12 months. The shares remaining to be subscribed for have been secured for disposal by the undersigned, who will receive applications during the next 14 days:—GEORGE BATTER, Esq., Copper-court, Birchington-lane, E.C.; and Messrs. HONLEY and Co., 45, Cornhill, E.C., from whom full particulars and forms of application can be received.—November 10, 1862.

Particulars, apply to Mr. RICHARD MIDDLETON, *Mining Journal* office, London, E.C.

GLOVER AND CO.,
No. 40, MANESTY LANE, LIVERPOOL.

TO INVENTORS.—All INTENDING PATENTEES should PROCURE the PRINTED INFORMATION regarding PATENTS, their COST and the MODE of PROCEDURE to be adopted, ISSUED GRATIS by the GENERAL PATENT COMPANY (LIMITED), 71, FLEET STREET, LONDON.

Having for several years given his attention to plan work, printed in colours, he respectfully refers his friends and the public generally to the numerous plates illustrating the volumes of the North of England Institute of Mining Engineers' Transactions, also to the late Mr. Bewick's work on Cleveland Ironstone, as specimens of good colour printing.

THE MINING SHARE LIST.

DIVIDEND MINES.

Shares.	Mines.	Paid.	Last Pr.	Business.	Dividends Per Share.	Last Paid.
1800	Alderley Edge (Cheshire) [L.]	10 0 0	60	..	7 18 6	0 10 0—May, 1862
4000	Bodford United (copper), Tavistock	2 8 6	4 1/2	..	12 17 6	0 2 0—Sept. 1862
240	Bocean (tin), St. Just	20 10 0	80	..	36 10 0	1 0 0—Mar. 1862
200	Botallack (tin), St. Just	91 8 0	250	..	49 18 0	4 0 0—Aug. 1862
1000	Cann River (copper), Illogan	10 0 0	65	..	273 10 0	2 0 0—Feb. 1862
200	Cefn Cwyril (copper), Redruth	10 0 0	10	..	9 0 0	4 0 0—April, 1861
2500	Copper Hill (copper), Redruth	48 0 0	67 1/2	..	9 10 0	2 10 0—Sept. 1862
12000	Copper Mines of England	25 0 0	25	..	7 1/2 per cent.	—Half-yrly.
350000	Ditto ditto (stock)	100 0 0	24	..	1 per cent.	—Half-yrly.
1055	Craddock Moor (copper), St. Cleer	8 0 0	28 1/2	..	7 12 0	0 4 0—July, 1862
612	Creschaw and Penkell, St. Columb	..	..	..	0 10 0	0 10 0—Jan. 1862
567	Cwm Erddin (lead), Cardiganshire [L.]	7 10 0	11	..	7 12 0	0 5 0—July, 1862
128	Cwmystwith (lead), Cardiganshire	60 0 0	100	..	247 10 0	4 0 0—Sept. 1862
280	Darwent Mines (lead), Durham	300 0 0	180	..	147 0 0	0 5 0—June, 1862
1024	Devon Gt. Con. (cop.), Tavist. [S.E.]	1 0 0	500	..	816 0 0	0 9 0—Sept. 1862
355	Dolcoath (copper), Camborne	128 17 6	570	..	686 10 0	7 0 0—Oct. 1862
2000	Dynham (lead), Redruth	12 6 0	104	..	0 15 0	0 2 0—Sept. 1862
512	East Basset (cop.), Redruth [S.E.]	29 10 0	52 1/2	..	104 0 0	0 2 0—Sept. 1862
614	East Caradon (copper), St. Cleer [S.E.]	2 14 6	42 1/2	..	4 17 6	1 0 0—Oct. 1862
300	East Darwen (lead), Cardiganshire	32 0 0	45	..	23 10 0	1 0 0—June, 1862
128	East Fourteen (tin), Pool, Illogan	24 0 0	420	..	315 0 0	2 10 0—Oct. 1862
2800	Foxdale (lead) Isle of Man [L.]	25 0 0	35	..	..	—July, 1862
5000	Frank Mills (lead), Devon	3 18 6	4	..	0 16 0	0 2 0—Mar. 1862
6000	Great South Toisus [S.E.], Redruth	0 14 6	6 1/2	..	7 18 6	0 5 0—Dec. 1861
1798	Great Wheel Fortune (tin), Breage	18 0 0	28	..	3 0 0	0 10 0—Oct. 1862
9098	Great Wh. Vor (tin), Helston [S.E.]	40 0 0	6	..	2 2 6	0 5 0—Sept. 1862
10240	Gunnis Lake (Clitters' Adit)	0 0 0	3 1/2	..	0 0 0	1 0 0—Mar. 1861
1024	Herdston (tin), near Helston [S.E.]	8 0 0	25	..	21 10 0	1 15 0—Oct. 1862
1000	Hibernian Mine Company	92 6 0	27 1/2	..	7 10 0	0 15 0—Sept. 1861
400	Isturbe (lead), Cardiganshire, Wales	18 15 0	110	..	399 10 0	4 0 0—Nov. 1862
9000	Marke Valley (copper), Caradon	4 10 6	10 1/2	..	2 4 0	4 0 0—Oct. 1862
1800	Minera Mining Co. [L.] (id.), Wrexham	25 0 0	200	..	99 18 0	7 0 0—Nov. 1862
90000	Mineral Co. of Ireland (cop., lead, coal)	7 0 0	19 1/2	..	14 7 11	0 7 0—Dec. 1861
640	Mount Pleasant (lead), Mold	4 0 0	27	..	18 18 1	0 7 0—Aug. 1862
6000	New Birch (tin), Redruth	10 0 0	15 1/2	..	0 10 0	1 0 0—Mar. 1861
1366	North Gribbler (copper), Redruth	2 6 0	6	..	0 10 0	1 0 0—Mar. 1861
5936	North Trekerber (copper), St. Agnes	1 0 0	4	..	0 1 6	0 1 0—Sept. 1862
4000	Orsedd (lead), Flintshire	0 0 0	1 1/2	..	0 10 4	0 8 0—Mar. 1862
640	Par Consols (cop.), St. Blazey [S.E.]	1 2 6	6	..	36 16 0	0 7 0—Nov. 1862
200	Parya Mines (copper), Anglesey [L.]	80 0 0	..	..	47 10 0	10 0 0—Oct. 1862
1772	Pobber (tin), St. Agnes	..	5	..	0 19 6	0 10 0—Oct. 1862
1123	Providence (tin), Ury Lelant [S.E.]	10 6 1/2	44	..	68 0 0	1 0 0—Aug. 1862
4000	Rosewall Hill and Ransom United	2 16 0	4	..	0 6 0	2 0 0—Sept. 1862
4026	Rosewarne Consols (copper)	3 7 6	..	..	0 2 0	0 2 0—Oct. 1862
16	Rosewarne (lead)	50 0 0	..	..	1250 0 0	100 0 0—Quarterly.
512	South Caradon (cop.), St. Cleer [S.E.]	1 8 0	410	..	386 0 0	5 0 0—Sept. 1862
512	South Toisus (cop.), Redruth, Cornwall	8 0 0	40	..	107 0 0	1 0 0—May, 1862
496	S. Wh. Frances (cop.), Illogan [S.E.]	18 18 0	100	..	364 0 0	2 0 0—Nov. 1862
280	Sphearns Moor (tin), St. Just	31 11 0	..	..	929 0 0	2 0 0—Oct. 1862
940	St. Ives Consols (tin), St. Agnes	8 0 0	28	..	48 10 0	10 0 0—Aug. 1862
9000	Tamar Con. (sil.-id.), Beeralston [S.E.]	4 10 0	13	..	4 6 0	0 2 0—Jan. 1861
6000	Tincroft (cop.), Pool, Illogan [S.E.]	9 0 0	13 1/2	..	11 13 6	0 5 0—July, 1862
1000	Trumpet Consols (tin), near Helston	11 10 0	..	..	11 0 0	2 0 0—Mar. 1862
4200	Vigra and Clogau (tin), [L.]	2 15 0	31	..	4 12 6	1 0 0—Oct. 1862
1024	Wendron Consols (tin), Wendron	11 13 0	12	..	8 15 0	1 0 0—Jan. 1861
1024	West Basset (copper), Illogan [S.E.]	1 10 0	14	..	14 10 0	0 10 0—June, 1861
60	West Burton Gill (lead), Camborne	60 0 0	..	..	14 10 0	0 10 0—June, 1861
1024	West Caradon (cop.), Liskeard [S.E.]	5 0 0	32	..	101 1 0	0 10 0—Oct. 1862
4000	West Fowey Consols (tin and copper)	7 10 0	3 1/2	..	0 19 0	0 3 0—May, 1862
1024	West Penarth (tin), Camborne [S.E.]	4 0 0	9	..	2 19 6	2 19 6—May, 1862
400	Wh. Seta (cop.), Camborne [S.E.]	47 10 0	260	..	363 0 0	5 0 0—Oct. 1862
512	Wh. Seta (copper), Illogan [S.E.]	5 2 6	85	..	589 10 0	2 0 0—Oct. 1862
256	Wh. Seta (copper), Redruth [S.E.]	1 10 0	52 1/2	..	929 0 0	2 0 0—Oct. 1862
9990	Wh. Seta Amalgamated (cop.)	30 0 0	20 22	..	929 0 0	2 0 0—Oct. 1862
128	Wh. Seta (copper), Redruth	60 0 0	90	..	3400 10 0	5 0 0—Oct. 1862
1024	Wh. Seta (copper), Redruth	2 4 0	29	..	2 0 0	0 10 0—Sept. 1861
1024	Wh. Seta (copper), Redruth	9 13 8	6	..	0 5 0	0 5 0—May, 1862
512	Wh. Seta (copper), Redruth	3 10 0	16	..	13 10 0	1 0 0—Mar. 1862
4000	Wh. Seta (copper), Redruth	2 10 8	11 1/2	..	2 2 0	0 10 0—Oct. 1862
596	Wh. Seta (copper), Redruth	9 17 6	38 40	..	74 5 0	1 5 0—Aug. 1862
100	Wh. Seta (copper), Redruth	36 6 0	440	..	284 5 0	4 0 0—Mar. 1862
1024	Wh. Seta (copper), Redruth	8 0 0	15 16	..	368 7 0	0 10 0—Sept. 1862
80	Wh. Seta (copper), Redruth	0 0 0	800	..	303 3 0	5 0 0—Oct. 1862
396	Wh. Seta (copper), Redruth	88 10 0	166	..	141 15 0	2 0 0—Oct. 1862
1040	Wh. Seta (copper), Redruth	5 17 0	17 18	..	45 12 6	0 10 0—Aug. 1862
5000	Wh. Seta (copper), Redruth	5 0 0	37	..	43 17 6	2 0 0—Oct. 1862

(*) Dividends paid every two months. † Dividends paid every three months.

MINES WITH DIVIDENDS IN ABEYANCE.

700	Aberdovey (silver-lead), Merioneth	1 10 0	30	..	0 10 0	0 10 0—Mar. 1862
4043	Alfred Consols (cop.), Phillack [S.E.]	3 15 11	..	..	20 3 0	0 2 0—April, 1862
2580	Conduff (cop.), Camborne	35 0 0	90	..	85 0 0	2 0 0—June, 1862
2400	Cook's Kitchen (copper), Illogan	10 0 0	31	..	85 0 0	2 0 0—June, 1862
4076	Devon and Cornwall (copper)	5 16 0	31	..	0 10 0	0 2 0—Feb. 1862
672	Ding Dong (tin), Gwulva	40 13 6	4 1/2	..	16 7 6	1 10 0—Mar. 1862
12900	Drake Walls (tin), Redruth	2 1 0	23 1/2	..	0 15 0	0 1 0—June, 1862
2048	East Wheel Lovell (tin), Wendron	2 13 0	..	..	0 5 0	0 5 0—July, 1862
4040	Fowey Consols (copper), Tywardreath	4 0 0	5	..	41 9 0	0 2 0—June, 1862
119	Great Work (tin), Gernoe	100 0 0	110	..	221 10 0	7 10 0—Feb. 1862
1000	Kelly Brook (copper), Redruth	4 0 0	110	..	140 0 0	0 5 0—June, 1862
30	Laxey Mining Company, Isle of Man	100 0 0	120	..	140 0 0	0 5 0—June, 1862
100	Levant (copper), St. Just	2 10 0	95	..	1091 0 0	5 0 0—May, 1862
470	Newtownards Mining Co., Co. Down	50 0 0	35	..	0 10 0	1 0 0—Sept. 1862
6000	North Downs (copper), Redruth	2 3 4	3 1/2	..	0 10 0	0 2 0—May, 1862
12000	Northdown Con. (cop.), Whitechurch [S.E.]	0 16 0	10 1/2	..	0 10 0	0 2 0—July, 1862
128	South Crinins (copper), St. Austell	10 0 0	285	..	60 0 0	0 20 0—June, 1862
6000	Tolvaddon (copper), Marazion	0 15 0	2 1/2	..	27 0 0	0 10 0—Sept. 1862
573	Trevelyan Consols (tin), St. Ives	11 10 0	15	..	7 0 0	0 10 0—Sept. 1862
256	West Damsel (copper), Gwennap	38 10 0	63	..	45 0 0	0 10 0—May, 1862
1024	Wh. Seta (tin), Ury Lelant [S.E.]	2 0 0	8 1/2	..	8 10 0	0 10 0—April, 1862
4995	Wh. Seta (tin), St. Agnes	4 19 6	4 1/2	..	0 18 6	0 2 0—July, 1862

FOREIGN MINES.

2464	Burra Burra (cop.), South Australia	5 0 0	91	..	280 0 0	5 0 0—Dec. 1861
4000	Central American (silver) [L.]	5 0 0	13 1/2	..	2 2 0	0 14 0—Oct. 1862
12000	Copper Cobbe (cop.), Cuba [S.E.]	40 0 0	23	..	98 12 0	1 0 0—Jan. 1862
13000	Copiapu Mining Company, Chile [S.E.]	16 0 0	8	..	6 8 0	0 5 0—Jan. 1862
16000	East Indian Coal, Calcutta [L.]	10 0 0	10	..	7 1/2 per cent.	—Yearly.
70000	English and Australian [S.E.]	5 0 0	2 1/2	..	7 6 0	0 2 0—Feb. 1862
25000	Fortuna (lead), Spain [L.]	10 0 0	2 1/2	..	0 10 0	0 2 0—Feb. 1862
20000	Gen. Mining Assoc., Nova Scotia [S.E.]	20 0 0	20 22	..	19 5 0	1 0 0—June, 1862
60000	Kapunda Mining Co., Australia [S.E.]	1 0 0	1 1/2	..	0 10 0	0 1 0—June, 1862
10000	Linares (id.), Pozo Ancho, Spain [S.E.]	3 0 0	7	..	8 16 0	0 5 0—Sept. 1862
10000	Lustanion (of Portugal) [S.E.]	2 0 0	2 1/2	..	0 19 0	0 1 0—Feb. 1862
10000	Marquitta and New Granada [S.E.]	1 0 0	3 1/2	..	0 6 0	0 1 0—July, 1862
10000	Port Phillip (gold), Victoria [S.E.]	1 0 0	1 1/2	..	0 6 0	0 1 0—July, 1862
11000	St. John del Rey [L.]	1 0 0	61	..	60 15 0	1 0 0—Jan. 1862
48174	Unit. Mexican (sil.), Mexico [S.E.]	28 5 0	5 6	..	2 1 6	0 5 0—Oct. 1862
20000	West Canada Mining Company [L.]	1 0 0	1 1/2	..	0 4 0	0 2 0—Oct. 1862

FOREIGN MINES WITH DIVIDENDS IN ABEYANCE.

10000	Altan and Quanganen (id.), [L.]	4 10 0	3	..	4 5 0	0 15 0—Nov. 1862
10000	St. Barre (lead), Min. & N. Ze. [L.]	4 10 0	2 1/2	..	15 per cent.	—May, 1862
10000	Pontgibaud (sil.-lead), France [S.E.]	20 0 0	4	..	1 0 0	1 0 0—June, 1862

NON-DIVIDEND FOREIGN MINES.

Shares.	Mines.	Paid.	Last Pr.	Bus. done.	Last Call
20000	Australian (copper), South Australia [S.E.]	7 7 6	1	..	Sept. 1858
20000	Bearis (tin) [L. £1]	0 10 0	1	..	Oct. 1862
75000	Bon Accord, South Australia (copper) [L. £1] [S.E.]	1 0 0	..	..	Jan. 1859
25000	Capula (silver), Mexico [L. £2] [S.E.]	0 10 0	..	..	Jan. 1859
17000	Central Italian (copper) [7000 £2 paid]	0 6 0	..	..	Jan. 1859
40000	Clarendon Consols (copper), Jamaica [S.E.]	1 2 6	..	..	July, 1862
10000	Copiapu Smelting [L.] Chile	10 0 0	8 1/2	..	Fully paid
100000	Don Pedro North Del Rey (gold), Brazil [L.]	10 0 0	..	..	Fully paid
25000	Dun Mountain (copper), New Zealand [L.] [S.E.]	1 0 0	1	..	Fully paid
25000	East del Rey, Brazil [L. £3]	1 0 0	1 1/2	1 1/2	Sept. 1861
80000	East Kongsberg Native Silver Mining Co. of Norway [L. £2]	1 7 6	..	..	Mar. 1863
15000	Elbe Colliery Company [L.]	1 0 0	..	..	Fully paid
30000	Ellerlie and Bardsley, Jamaica	0 18 0	1 1/2	..	July, 1858
8000	English and Canadian Mining Company [L.]	5 0 0	..	..	Fully paid
80000	Great Northern (copper), South Australia [L.] [S.E.]	1 10 0	..	..	June, 1862
75000	Hindostan (copper), Bengal [L. £2]	1 10 0	..	..	Mar. 1862
4000	Hope Silver-Lead and Copper Mining Co. [L.] Jamaica	25 0 0	..	..	Fully paid
60000	Imperial Thessalian (lead &c.), Thessaly [L. £2]	0 10 0	..	..	June, 1866
10000	Karbitz Colliery Company [L.]	1 0 0	17 1/2	..	Fully paid
30000	Lagunaso (sulphur, copper), Portugal [L.]	1 0 0	..	..	Fully paid
100000	Montes Aures (gold), Brazil [L.] [S.E.]	2 0 0	2 1/2	2 1/2	Fully paid
2000	New Burra Burra (Australia)	5 0 0	..	..	Fully paid
60000	New Granada (gold), South America [S.E.]	1 0 0	..	..	Nov. 1858
10000	New Grand Duchy of Baden (silver-lead), near Freiburg	1 0 0	1	..	Nov. 1858
60000	North Rhine Copper of South Australia [L. £1] [S.E.]	0 17 6	..	..	..
15000	Pachusa Silver Mining Company, Mexico [L. £1]	0 15 0	..	..	April, 1861
17000	Pachusa (copper), Venezuela [L. £10]	1 10 0	1 1/2	1 1/2	July, 1861
20000	Santa Barbara (copper), California [L.]	0 10 0	1 1/2	1 1/2	Mar. 1861
20000	Scottish Australian Mining Company [L.]	1 0 0	1	..	..
10000	South Europe Mining Company, Spain [L. £2]	3 0 0	..	..	May, 1861
80000	St. John's United (copper, lead), Newfoundland [L.]	1 0 0	..	..	Fully paid
12000	Teplitz Colliery Co. [L. £25]	2 0 0	..	..	..
45000	Victor Emmanuel, Italy [L.] [30,000 Pref. Shares, 15s. pd., 25,000 £1 pd.]	1 19 0	..	..	..
10000	Western Africa (copper), [L.]	110 0 0	..	..	Oct. 1858
12000	Whim Eilen, South Australia [L.]	5 0 0	..	..	Fully paid
35 125	Whim Jamaica (copper)	1 0 0	18 1/2	..	..
30000	Worthing (copper), South Australia [L.] [S.E.]	1 0 0	..	..	Fully paid
45000	Yudanamatuna (copper), South Australia [L.]	3 0 0	2 1/2	2 1/2	..